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SILVER CUSTODIA OR OSTENSORY, BY ENRIQUE DE ARTE
IN CATHEDRAL OF CORDOBA

THE AMERICAN ARCHITECT

VOL. CXVII. WEDNESDAY, JUNE 23, 1920 NUMBER 2322

A VILLAGE SCENE IN THE MEUSE

Reconstruction of Devastated France

Part I.—Introductory

By RALPH FANNING, *M.S., B.Arch.*

READERS of THE AMERICAN ARCHITECT will remember an interesting collection of illustrations in the number of this periodical published October 10th, 1917. These illustrations show some of the charming bits of rural architecture in France, of types which devoted and optimistic lovers of "la belle France" hoped might serve as examples of architectural charm, and as a reminder and inspiration to those whose task it would be to perpetuate the quaint beauty of French building in the restoration of the war-torn regions. Nearly three years have passed since that inspiring collection of illustrations was published—years of great destruction, of decisive action, of grand accomplishment, but years that have brought even greater and more complicated problems than the hectic strenuousness of war ever suggested. The problems of reconstruction have always been more difficult than those of destruction, and Europe, after four years of pitifully efficient attention to the latter, is now called upon to face the former with all its myriad perplexities.

Perhaps no group of citizens is more involved in responsibility of profession nor called upon to solve a more difficult problem in the great task of reconstruction than the architects and builders of all kinds, for upon material reconstruction depends so much of the progress of social and moral readjustment. From an architect's viewpoint, then, it may be of interest to those readers of THE AMERICAN ARCHITECT who have shared the fortunes of a beloved country through her years of travail, either by serving on her soil or by bearing equally arduous burdens supporting her with loyalty, faith and funds, on this side of the Atlantic, to review the present situation and immediate problem as formulated by

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two years' building experience in one of the most devastated regions of France, that of the Meuse district directly west of Verdun.

Comparing the aforementioned illustrations with the ones that come from a post-bellum film pack, and

MOST ANY VILLAGE NEAR VERDUN-DOMBASLE

with the scenes that stamp themselves so indelibly upon the memory of a worker in the "regions liberes," does not make for optimism unless one be of a nature that is exhilarated by gigantic tasks.

Turning from the reproduction of that delightful scene from the brush of M. Renauden, that painting of Varennes-en-Argonne in its pre-war picturesqueness, to the sad and dingy realities revealed by snapshots taken not far from the same site but a few months ago, there comes the feeling of great tragedy, of an unredeemable loss. The thrills of violent catastrophes and the excitement of great

RHEIMS—NOVEMBER, 1919

activities have been apt to push into the background the stern realities of the future problem. The builder who worked his way into the devastated areas immediately after the cessation of hostilities might go equipped with high ideals and splendid plans, but they too often had to be pushed to the dim distance while the first home was being established in an excellent, though somewhat gloomy, German dugout.

Such was the first civilian after-war home to be founded in historic Varennes. In such a home, the misfortune of having the only cook-stove and the breakfast porridge go violently ceilingward, as a result of the cook's experimenting with the use of stray high-explosives as kindling, seemed as great a tragedy, in retrospect, as the traditional overturning

VARENNES-EN-ARGONNE, AFTER THE BOMBARDMENT

of a furniture van that impeded the flight of the royal coach in that bygone day when Louis XVI and Marie Antoinette were captured but a few rods from this very dugout, and taken back to the frenzied revolters of Paris.

Thus the great war pageant looms up behind all those whose experience it was to have an orchestra seat at the performance, in such distortion that it is difficult to view it all in correct perspective. Yet, only those near the stage can obtain the intimate view that seems essential to a correct and sympathetic understanding of both actors and spectators. Indeed, the reconstruction problem is as a drama that must be seen from many angles to be understood and appreciated. All authentic information will tend toward this greater appreciation and a more just solution for the future welfare of a country that, perhaps more than any other with the possible exception of Italy, is universally loved and revered by architects.

Those of the profession who were spending their time in France prior to the signing of the Armistice, trying to ease the overcrowded housing conditions

of the French towns and cities where refugees were being herded and living conditions were pitifully abnormal, longed for the day when opportunity would be given for more permanent work. The American Red Cross and other relief organizations

A CLEARED STREET IN RHEIMS

planned building projects to take care of some of the stranded population specially in connection with child welfare and settlements for tubercular victims. There was, however, little chance to do anything of a permanent architectural nature, so uncertain and critical were the times and so little cooperation could often be obtained from over-taxed French municipalities for encouraging a class of unfortunate dependents to rest too comfortably within their walls. There was a rumor of how some enterprising, though seemingly heartless, officials in an ancient Loire city staged fake air raids at night to induce the terrified refugees to move further south when housing conditions within their city walls became too congested for their sense of hospitality. Until the tide of battle definitely turned, few could do much but put every bit of energy into the always pressing problem of the moment,—evacuation, canteen and hospital work which could not wait. Inspired by the suffering and the patient heroism of the French people, there were ever hazy plans and fond dreams for Reconstruction, a word that was on the lips of many in their hopes and prayers for the future.

Only with the signing of the Armistice could any organization for relief or reconstruction begin any very tangible work along building lines, beyond the manufacture of portable houses and the collection of materials, for the region to which the government made special assignment. The section with which the writer became most personally familiar was that of some forty villages of the Meuse directly west of Verdun, a section assigned to the War Victims' Relief Organization of Anglo-American Quakers, known for their relief work in France as early as the Franco-Prussian War of 1870 under the name of Société des Amis. Working as a civilian branch of the American Red Cross and affiliating with the Croix Rouge Francais and Croix Rouge Britannique, opportunities were given also for observing other attempts, both individual and private, that are being made in the first endeavors at reconstruction.

AN ARCHITECT'S POST-BELLUM PROBLEM

Much of the building that has been done to date has been emergency relief housing, but that is not without its architectural interest. The more permanent rebuilding is a French problem which many think can best be solved by the French themselves. However, much American interest, as well as capital, has already been bestowed upon France and many of the French people, both investors and architects, have expressed desire for aid and co-operation from their allies from across the Atlantic. Modern French architecture, referring especially to domestic buildings, has not always compared most favorably with that of other countries, although few can compete with their solutions of the more monumental formal planning. French architects, themselves, have admitted that and strived rather in vain to obtain the more naturalistic, unrestrained dwellings of the older periods, which strangely seems more often happily obtained by American or English designers. The Beaux Arts has made some interesting studies of reconstruction problems, but mostly in an extremely academic, theoretical fashion. Perhaps there may be places where such schemes may be carried out, but most of the village rebuilding problems must be approached through the dusty files of the prefect's office, for the deeds of individual land-owners, traditional rights and local customs must be known and considered or else the most ideal of projects will come to naught. Withal, there must be an infinite amount of labor, infinite patience, tact and study. Such vast destruction as the past years have

THE FIRST CIVILIAN HOME, AFTER THE ARMISTICE, IN VARENNES-EN-ARGONNE ONCE A GERMAN DUG-OUT

brought, and the economic waste the world over, are not to be redeemed in a day; neither are broken and wasted lives nourished on hate and distrust quickly restored to productive order and co-operation.

CHURCH OF S. CROCE, FLORENCE, ITALY

New School Buildings, State of Delaware

Part II.

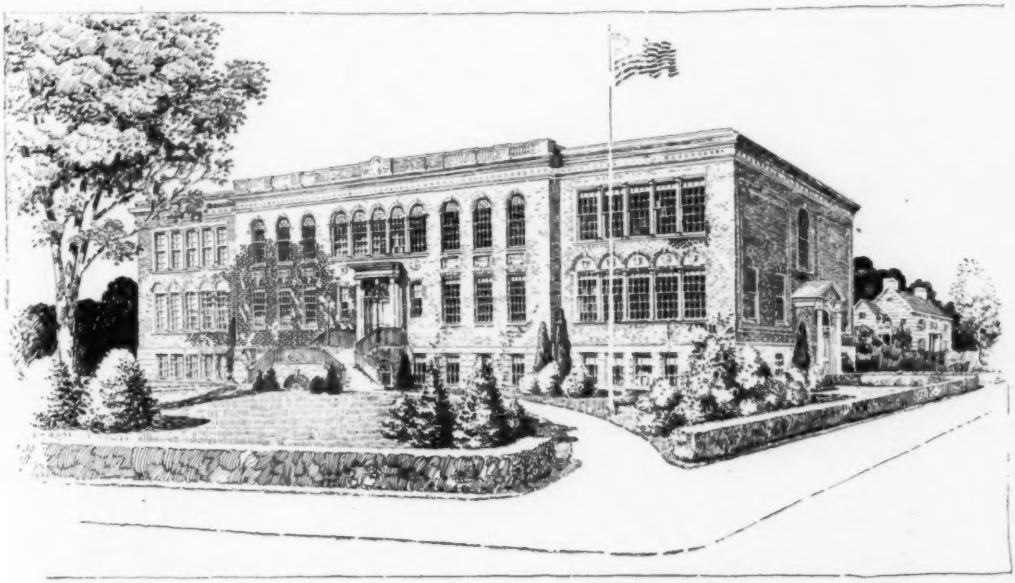
By JAMES O. BETELLE, *A.I.A.*

Illustrated by the work of Guilbert & Betelle, Architects, for the Delaware School Auxiliary Association, incorporated for the purpose of expending the duPont Fund for new School Buildings

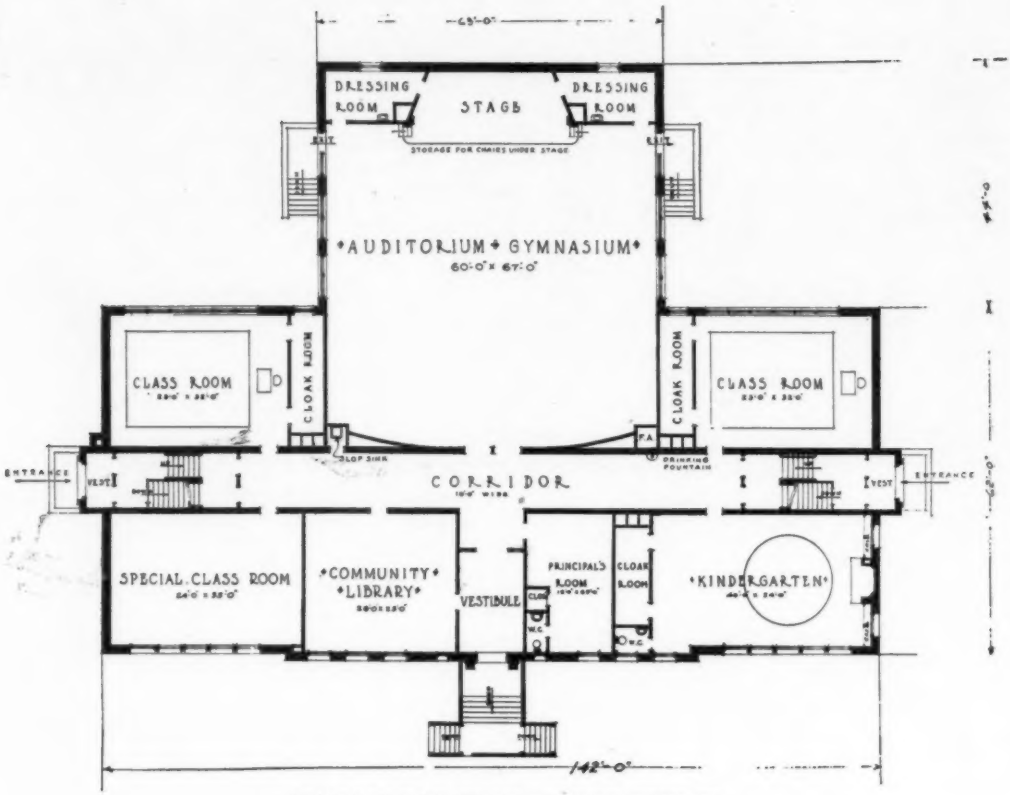
ONE of the most serious problems in connection with efficiently regulating the schools in small communities and suburban localities has centred around the proper housing of its teachers. The problem in many places has indeed become acute and has adversely affected the grade of teacher that might be secured and retained. Many of the causes at present reducing the number of workers on the farms and in the small communities are also effective in the case of teachers. And just as better housing would be the chief factor in adjusting the farm labor problem, so would the whole community life be improved if its teachers might find surroundings in keeping with their work and temperament. Teachers themselves preach the doctrine of the importance of proper environment. Their own development is not immune from its influence and a proper regard for community welfare demands that such environment be made available.

While we are all familiar with the recent housing problem in our cities, it has always been and always will be a problem for the teachers in our rural schools. The teacher is usually a stranger in the district and the farm houses are in scattered locations, often remote from the schoolhouse. The type of family with whom the teacher would desire living will not take in a boarder; families who will accept a boarder are not congenial to the teacher. The duties of a teacher necessarily make her working hours and habits different from the ordinary farmer's family. She may have study or work to do in the evenings and the only warm, comfortable place is in the combined dining-room and kitchen around the stove, where the rest of the family is gathered discussing the latest neighborhood scandal and gossip. These conditions do not promote serious work or study, yet if the teacher went to her own room she would find it uncomfortable and without heat. Furthermore, she would run the chance of being misunderstood and accused of being exclusive and unsociable.

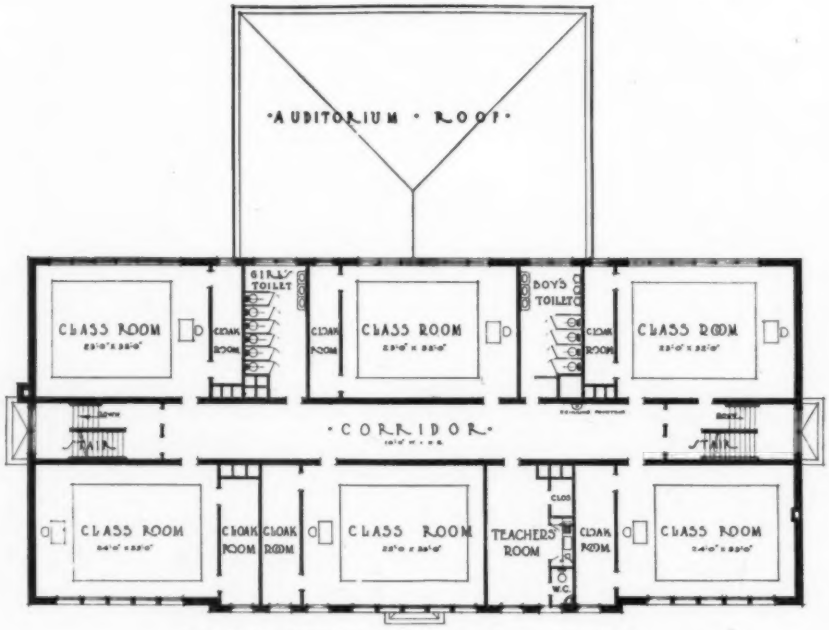
The real solution of the problem has been the



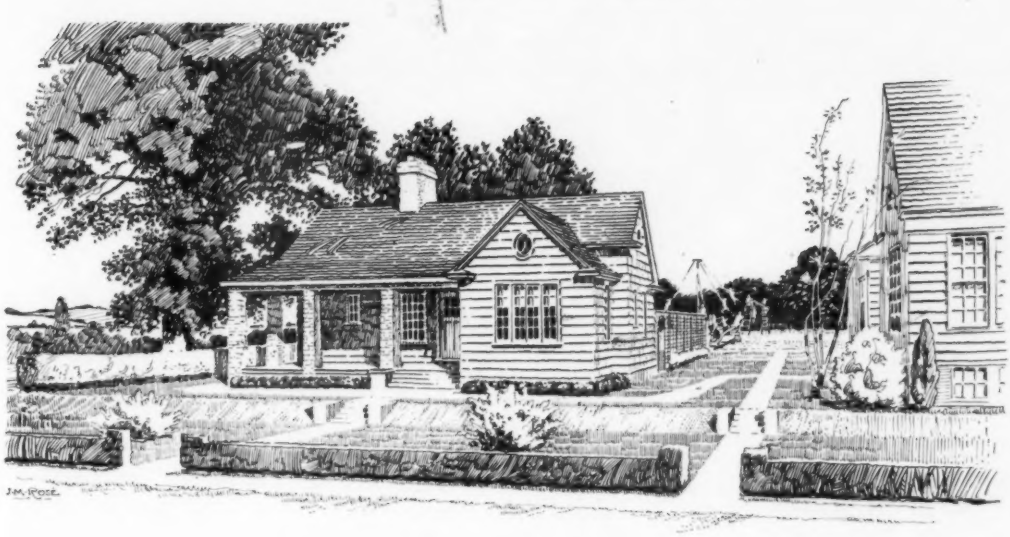
GRADE SCHOOL BUILDING



FIRST FLOOR PLAN—GRADE SCHOOL



SECOND FLOOR PLAN—GRADE SCHOOL



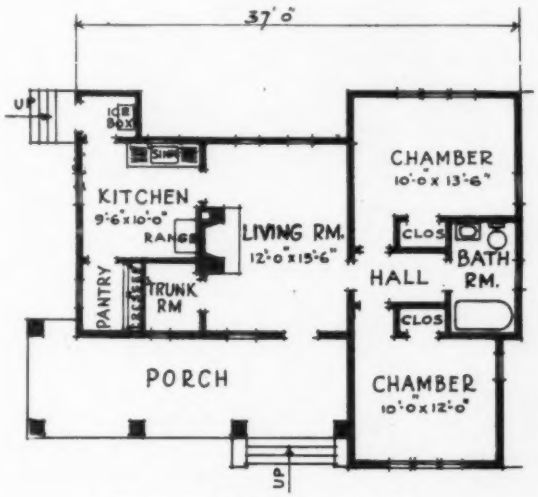
TWO TEACHER COTTAGE

teachers' cottage or "Teacherage," as it is often called. It fills the purpose for the school that the "Rectory" does for the church, only it is really more necessary. Foreign countries have long recognized and met this need, but only recently have we in this country done anything toward its solution. An attempt has been made to build the school with living quarters for the teachers on the upper floor. This has been found to have many undesirable features and some State laws forbid any living quarters to be combined with the school building. With these things in mind, the architect at the present development has provided for the construction on the school property of small houses so designed as to afford housing for teachers that would attract dignified and worthy representatives of that important profession. As would naturally be inferred, the design of these cottages has followed along the lines of the school buildings of which they become a part. Illustrations of such cottages accompany this article.

A great many advantages are served by an innovation of this kind. The teacher is lifted above the petty annoyances of finding a living place and being subjected to the sordid cares of rent-paying and housekeeping. She is provided with dignified quarters that inspire the respect of the student body and of the community. She is spared the long and tiresome walks in inclement weather at present necessary between the usually remote "third floor back" and the school, and is permitted more time to avail of the library, laboratory and gymnasium facilities of the institution with which she is identified.

With the added time at her disposal and with the mental wholesomeness so secured, she is able to be the source of stimulation and help to the entire community, and over a longer daily period, than is otherwise possible. The school in the small town is more and more the social center for community life. The proximity of the teacher puts her in a position of influence. She may be readily consulted; her well-trained mind will not be omitted from the general councils because she must be sought in a room miles away from the centre of activities.

This closer intercourse puts her in better touch with the needs of the community. It insistently demands that she apply the practical, common-sense

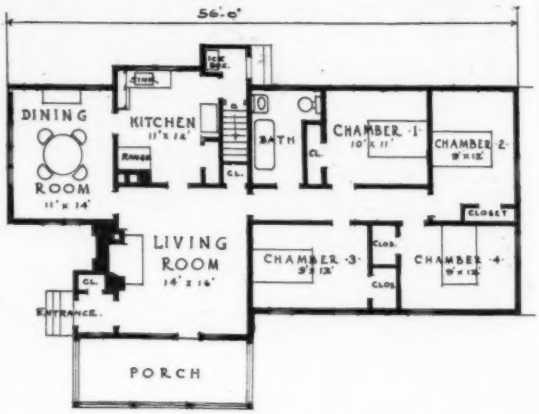


TWO TEACHER COTTAGE

attitude toward her work; for her intimate knowledge of community problems will prevent her from disregarding them or dealing only in far-away theories. She will thus make the school a living, growing thing, with tangible bearing on the needs of the people in it. Her nearness to the school puts her in friendlier relation with her colleague teachers, and a better spirit of co-operation among the teaching staff is made possible.

While perfection is not claimed for any of the plans of the school buildings illustrated, it is claimed that they show an advance in school designing and that the exteriors express the purpose for which the building is built and at the same time making a workable school and a building of good architectural quality. While these buildings were designed especially for the conditions to be met with in the State of Delaware and may not apply to other States where the conditions or requirements are different, they do contain many desirable features that might be taken advantage of for new schools to be built anywhere. It is hoped that the new building program in the State of Delaware will contribute its part to the general improvement in school design.

The outlook for the school children in the State of Delaware is a bright one. In a few years' time they will all be housed in new school buildings where it will be possible to give proper instruction under first-class teachers. While the present conditions are not all they should be, the defects are known and the remedy is available. The results will justify all the labor and money spent and make healthier and better educated citizens for the "Diamond State" and indirectly benefit the nation as a whole.



FOUR TEACHER COTTAGE

FOUR TEACHER COTTAGE

Chicago Solving House Shortage

WITH 175 model homes for workingmen and their families nearing completion Chicago, it is believed, is finding the solution of the housing problem.

That solution consists in a gigantic housing association, directed and financed by men of national reputation, encouraging small wage earners to acquire and own their homes, and providing a carefully worked out plan for enabling them to do so.

Forty acres of land have been devoted to the erection of specially designed houses by the Chicago Housing Association. The tract is known as "Garden Homes." A great many of the houses now nearing completion have already been distributed among the applicants who appear daily at the association's headquarters. There are many other homeseekers who have arranged to purchase houses on lots as yet untouched by building operations.

An effective plan of model housing has been adopted. A new principle for such enterprises has been adopted—that of devoting the profits from the sale of business frontage to helping buyers of inside frontage pay for their property.

Purchase of property in "Garden Homes" is restricted to small wage-earners with families and unfit housing conditions. The cost of each house, on its 162½x30-foot lot, is from $4,000 to $4,500. The housing plan calls for a 10 per cent payment down, the balance payable in 180 monthly installments lasting through a period of fifteen years.

As a part of the consideration for the property buyers agree not to resell without the consent of the housing association, which has first option on the property, being privileged to return the money paid and resell to another party, preventing speculation in the realty contained within the boundaries of the new sub-division.

To make sure that each family shall have a home in event of death of the breadwinner, a low-cost decreasing premium life insurance policy is to be taken out for each buyer. Part of each monthly payment made on the home will be diverted by the association to apply on the insurance premium, and, in event of death, a deed will be given immediately to the heirs of the home buyer. The face value of the policy, covering the amount due on the new home, is to be assigned to the association.

When it was decided to develop the forty acres, the plan of the entire property was placed in the hands of C. S. Frost, architect, who produced the several designs of homes adopted by the association. There are seven different architectural designs, all, however, based upon the same floor plans, but so arranged as to exteriors, interiors and decorative effects as to preclude any liability of sameness in appearance. The houses contain five rooms, mostly detached, covering 22x27 feet of ground.

Mr. Frost also completed in conjunction with a number of landscape experts a working plan for landscape improvement designed to make the property as a whole, and each individual home as attractive in exterior as possible. There are to be two roadways of 100-foot width. Every avenue is to be planted with decorative shrubs and trees.

"Our experience so far," said James F. Basiger, general manager of the association, "seems to have proved that in large scale work such as ours it is better to trust operating details to established and skilled men, rather than to attempt building up an organization to do the work."

All the work of developing "Garden Homes" is being done by day labor directed by the appointed contractors in charge, except the plumbing, sewerage, electrical work, glazing and plastering.

Among the interesting methods employed was that of excavating for basements with a steam shovel. The shovel excavated an entire block of basements at an operation, digging a huge trench in which the concrete foundations were poured in prepared forms, which are used over and over as the building is advanced. It is cheaper and faster to dig the trenches thus, and later fill in between the houses by steam shovel, than to excavate manually or with teams.

Great economies and means of speed were worked out in the system of building employed. As fast as the steam shovel dug and leveled the trenches for basements, and dug the taplines for water and sewer, the concrete crews followed in with their basement forms. Cement mixers were put in operation at the cross street junctions. From these a steady stream of barrowmen took concrete to the basement forms. As fast as the foundations hardened, the brick and tile layers succeeded the foundation men. And as these artisans finished their work the carpenters came on to joist and roof the structures, in turn making room for the various craftsmen to finish and decorate the houses. Thus a force of from 350 to 400 men has been steadily employed.

Applications have been approved for all houses now nearing completion, and before the project is completed it is expected there will be a long waiting list. The housing association aims, eventually, it is said, to construct between 8,000 and 10,000 houses, providing model modern housing for workers' families in various localities.

Recent Legal Decisions

By JOHN SIMPSON

Assignment of Future Payment by Contractor

Where a contractor in alleged violation of his contract with his surety assigned a future payment under the contract to a bank to pay a materialman, it was held, United States Fidelity etc. Co. v. Elliott (Ind.), 123 N. E. 178, that the surety, which, with knowledge of such assignment, took over the contract on the contractor's failure and completed the work, was thereby estopped from claiming that such assignment released it as surety, the surety's acts constituting a ratification of the assignment.

In an action for balance due on contracts for supporting and underpinning a building, the defense alleged nonperformance of work in consequence of which the building sunk and swayed over the property line, and a counterclaim was made for damages. The reply alleged the owner's interference, rendering performance impossible. The Pennsylvania Supreme Court held, Kress House Moving Co. v. Hogg Co. (Pa.), 106 Atl. 351, that evidence as to conditions on the ground at the beginning of the work, explanatory of the method of the defendant's interference, was admissible, and also evidence that the disturbance of the building occurred after the completion of the work, and not from the method of work.

The Connecticut Supreme Court of Errors holds, Lenox Const. Co. v. Colonial Const. Co., 105 Atl. 467, that under a construction contract providing that the owner, upon failure of the contractor to prosecute the work with diligence, could provide labor and materials and deduct the cost thereof from any money due on the contract, on such failure being certified by the architect, recovery for labor and materials used was dependent upon a showing of such certificate by the architect. But the contract in question also provided, as a condition precedent to the owner's right to terminate the contract, that the architect should not only certify that there had been a failure on the part of the contractor, but also that such failure was a sufficient ground for the termination of the contract. It was held that the owner could not terminate the contract and take over tools, materials and appliances where the architect had certified failure to prosecute the work with diligence, but had not certified that such failure was sufficient ground for the termination of the contract.

General contractors for the erection of a building sublet the excavation. The plans and specifications called for the excavation of a cellar to a depth of 10 feet. After excavating about 2 feet, the subcontractor, to the surprise of everyone connected with the work, including the architect, struck solid rock. He stopped work and notified the architect that he did not consider blasting within the terms of his contract, and that he would not proceed unless he was paid for the blasting as extra work. He completed the work and sued the owner for the actual cost, claiming that the architect authorized him to proceed with the blasting as extra work.

The West Virginia Court of Appeals held, Rosenberg v. Turner, 98 S. E. 763, that ordinary words or phrases may by usage of trade acquire a restricted or limited meaning, and when they do, that meaning may be shown by parol evidence, and hence the word "excavate" as used in a building contract may be shown to be used in a certain locality to mean removal of dirt only and not of stone. While the court was of opinion that the word "excavate" as here used covered the removal of solid rock as well as earth and loose material, as the architect, under the building contract, had the power to decide whether or not such extra compensation should be paid by the owner, and the evidence conflicted as to whether or not he so agreed, the question was one for the jury, which decided in favor of the plaintiff.

A building contractor agreed to purchase a license for the use of a patented process for the construction of a floor, the license to be paid for upon the construction of a satisfactory sample floor. The sample floor was constructed and was satisfactory, but the proposed purchaser of the license found that the cost was greatly in excess of the representations made to him, and for that reason refused further to execute the contract. In an action by the owners of the patent process, the West Virginia Supreme Court of Appeals held, Wetterwald v. Woodall, 98 S. E. 890, that there could be no recovery against the proposed purchaser because of such refusal, it appearing that he could not inform himself in advance of the cost of construction of such a floor, because of the secret process used therein.

The Wisconsin Supreme Court holds, School Dist. v. Blystone, 170 N. W. 721, that a stipulation in a building contract that upon the contractor's nonperformance the owner, upon the architect's certificate, could terminate the contract and complete the work, the damages to be certified to by the architect, is mainly for the owner's benefit, and waiver there-

(Continued on page 793)

EDITORIAL

Playing the Game

PLAYING the game for all it is worth and with all we possibly have is the thing to do. In no walk of life today does the race go to the slow. Maxims such as "the race is not always to the swift" may have served to inculcate caution into earlier generations. That of today will have none of such sophistries. If we are to reach success we must play the game. And the reason is that every one with whom we come into contact is playing the game for all he has in him.

Today more than ever before competition is the life of trade. Competition that is honorable, that will bear the white light of day, is the impetus that spurs to big achievement. Not the competition that unfortunately deals in devious underhand methods, but the competition for accomplishment that is the soul of every contest. We must play the game, play it squarely and honorably as to our relations with our competitors. We must eliminate every contestant that will not subscribe and adhere to the ethics that should rule. And, when we play the game, we should play our game and not play our opponent's game.

A writer on sporting topics who brings to his work a fine mentality and much literary ability was asked why it was that players of lesser skill always made the greatest percentage of errors when facing "star performers" in their particular sport. He answered: "In fearing an opponent there is always the probability that you will not be near your best. The tendency then is to play him rather than to play the game." This being exactly true in the field of sport, it is equally true in any walk of life where competition exists. There's a vast difference between smug confidence born of a pronounced conceit and the effort to bring to our task everything we know, everything bearing upon it we can learn.

EVERY professional man has in a sense lined up at the start in his race, equally with his competitors. If he succeeds he must needs play the game, his own game, and not that of his competitors.

Every man in the profession of architecture who has achieved high place and received just recognition for ability, has played the game—his own game—in his own way. This will not mean that he has entirely ignored the game as played by his competitors, for on the contrary he has probably studied it in all of its subtleties and knows exactly how to avoid the things which when put into play by his competitor may lead to his own defeat.

The game is based on knowing essentials and the elimination of non-essentials. It's the game as played by the Irish pilot who upon being asked if he knew the location of every rock and shoal in the Channel replied that he did not, but he "knew where they wasn't." And that is enough for certainty and safety.

If we are to pursue architecture as largely a business, we shall have to bring to our help anything that will help us play the game in a business-like way. Undoubtedly the best method will be to play our own game, with a good knowledge of that of our opponents. We must not, in an endeavor to beat him, play his game. If we do, we shall never finish better than second place in any game in which we are a contestant.

The Housing Shortage in New York

LIKE the fabled king of Spain who marched his men up a hill only to march them down again, New York has worked with considerable effort to house its hotel and apartment population and then has deliberately set about marring what it had done.

For example, the Knickerbocker Hotel at Broadway and 42nd Street has ceased to exist and this well-known hostelry is now to be turned into an office building. Here more than five hundred rooms are withdrawn from New York's hotel accommodations and such withdrawal will be found a serious matter, for in spite of repeated building of hotels during the past two years it is true that every day hundreds seeking hotel accommodations seek in vain.

It is stated with authority that we are short in New York sixty thousand dwellings. In spite of this very serious condition, it is to be seen that all over Manhattan Island many of the largest apartment houses originally designed with apartments on the ground floor are being remodelled and these ground floor apartments turned into stores and offices. Such action consequently increases the scarcity of available dwelling accommodations. The fact that our hotels are inadequate to house our transient population or that the scarcity of apartments or the abnormal house rents work very serious hardship on the people appears to be ignored. Possibly these conditions may ultimately become checked by the extension of the zoning idea to individual structures and certain well defined laws become enacted to regulate the conversion of buildings from their original purpose.

Further, as relating to buildings under construction, it is found that the proportion of business structures to housing structures is excessively high. The present need of dwellings is ignored for the reason that the income possibilities of commercial structures are so very much greater.

BEFORE the war, office buildings in New York were not regarded as paying investments. The building of these structures was believed to have been overdone and large loaning or investment companies hesitated to extend loans except on the most "gilt edged" propositions. Is it not possible that similar conditions may exist within another decade?

Many new commercal buildings are being erected on former sites of dwellings, and the tenants, many of long occupancy, are forced at great expense and much inconvenience to seek for even a place to sleep. These conditions are even more apparent in the new clothing trade zone which abuts on Seventh Avenue south of Forty-second Street. Many large structures are being erected and dwellings from four to ten in number and in some instances those that cover half a city block have been demolished to make way for these commercial structures. In other localities conditions are equally bad and residences are being demolished for moving picture theatres, small shops and commercial enterprises of every description.

TO finance all of these large commercial propositions vast sums of money are required. This has caused a scarcity of money available for residential construction.

A concrete example as to how this works out in discouraging investors to embark in housing enterprises is shown in the petition of a housing corporation capitalzed at $500,000 asking for the appointment of a receiver. The bill of complaint as presented to the United States District Court reads in part as follows:

"On information and belief that the defendant corporation has declined to accept loans offered to it upon the ground of the excessive interest rates charged; that said interest rates and bonuses asked for said loans amount as high as 25 per cent on building loans for a period of four months; upon information and belief that the defendant corporation has since the first of February, 1920, conducted its operation on a basis of temporary loans and finances from your orator and others, due to the fact that on or about that date, having theretofore accepted a loan of $600,000, which agreement was upon the time set for the closing thereof repudiated, leaving the defendant corporation dependent on such temporary loans as it has since been able to procure."

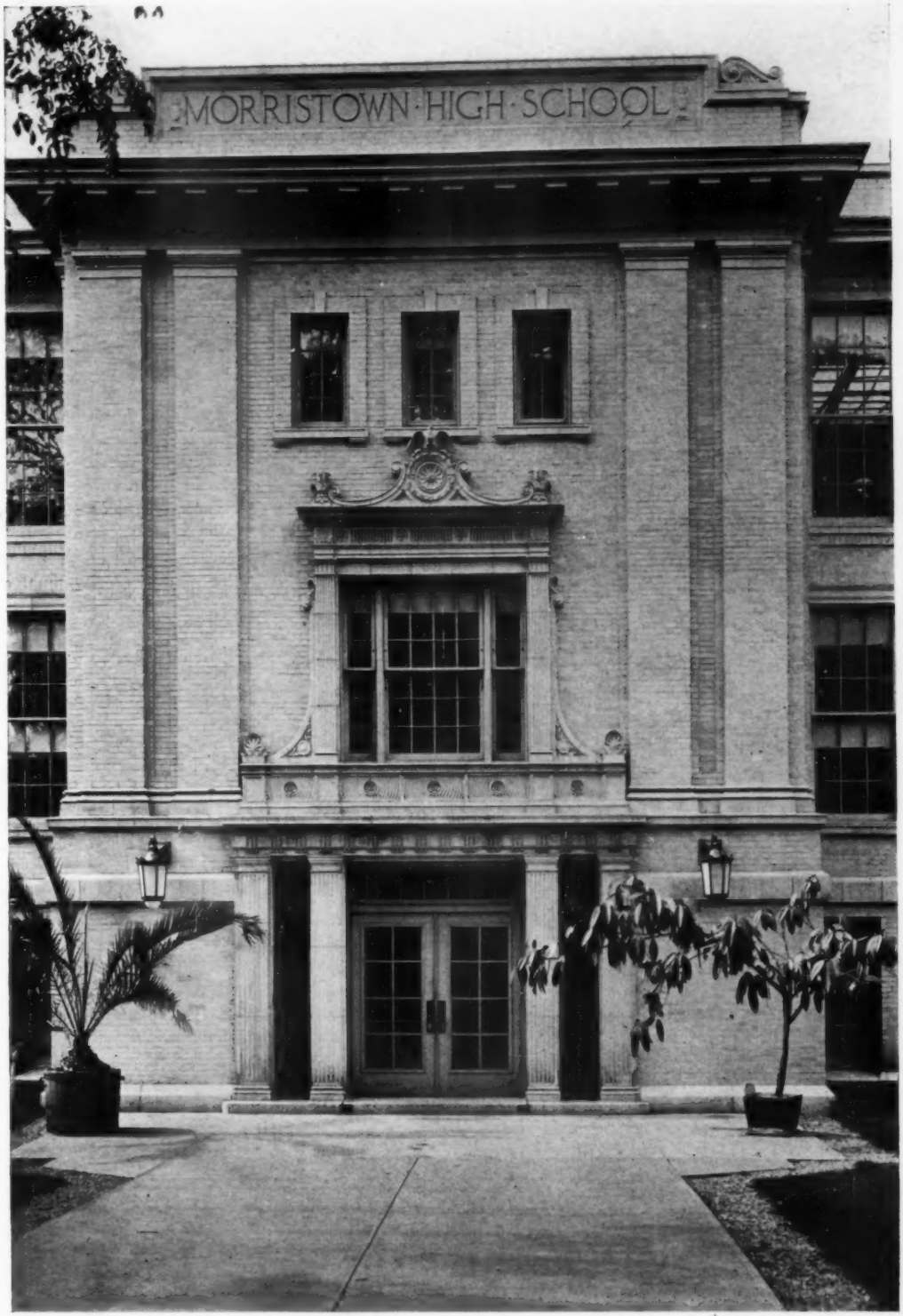
As those who are best informed as to our housing needs are agreed that we must encourage the greatest possible production, undertaken with all possible haste, it is difficult to understand why all these contributing factors to a diminishing of our housing requirements are permitted to proceed without such spoken protest.

Engineers Effect a National Federation

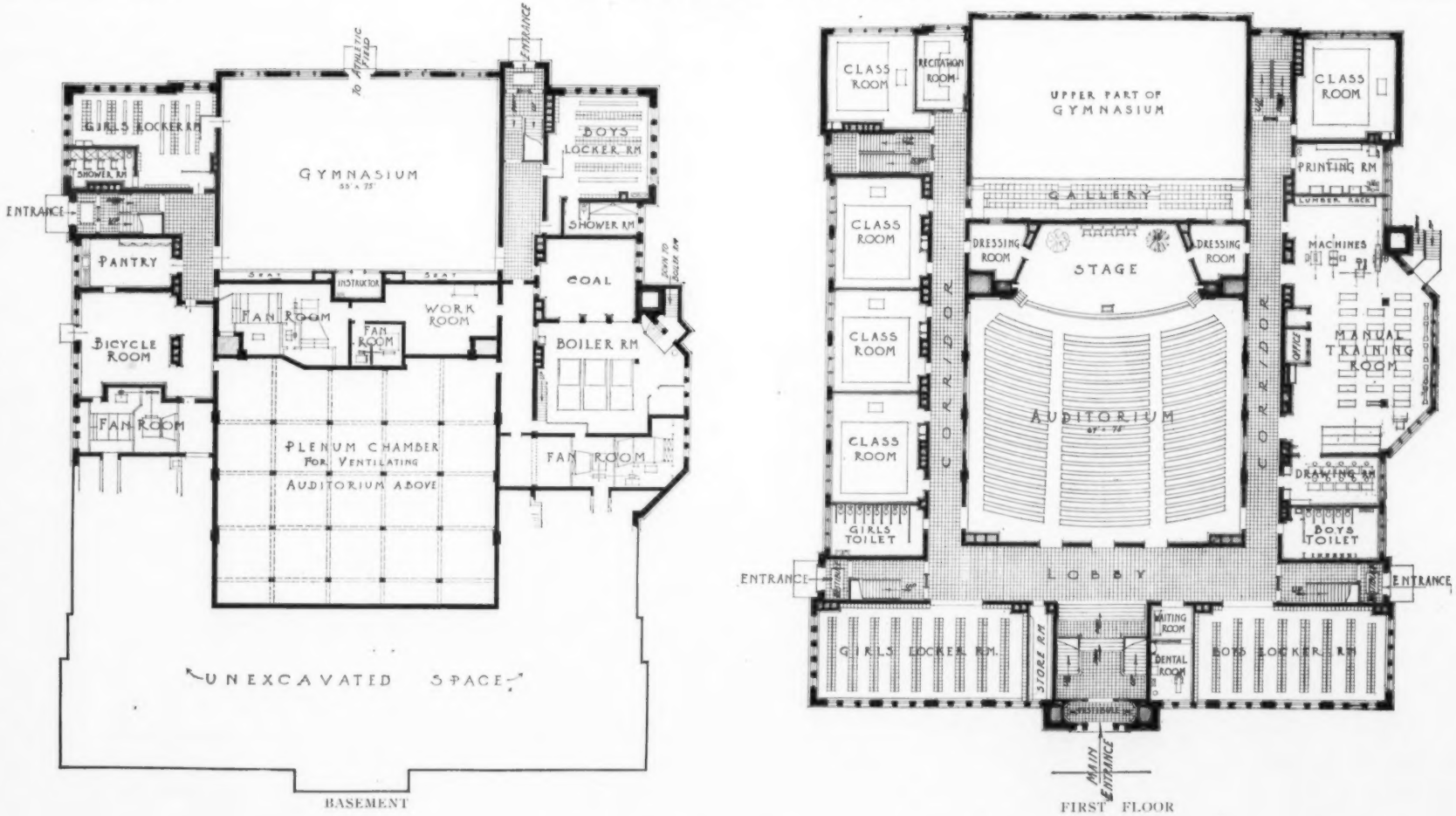
ELSEWHERE in this issue will be found notice of the formation by Engineers of a National Federation, for the purpose of co-ordinating the efforts of the entire profession and to avoid that disjointed effort which in the past has resulted in "lost motion" and a failure to secure the best results. It is interesting to note that the sentiment expressed at this meeting as to the essential functioning of engineers is similar to the contention advanced by this journal as to the practice of architecture. Engineering, it was urged, was at all times a profession and equally a business. It was further contended that unless the interests of the engineering profession were conserved on the basis of agreed business policy there would never be attained the most fruitful results. This is exactly true. It is a healthy indication as to the practice of architecture and engineering that the thoughtful men in these professions are thoroughly of this belief.

THE AMERICAN ARCHITECT believes this organization by engineers is one that will result in a large measure of good to the profession of engineering. It is a practical demonstration of views long and stoutly maintained by this journal and exactly in line with definite progress toward a closer and more valuable working association of engineers throughout the country.

HIGH SCHOOL, MORRISTOWN, N. J.
GUILBERT & BETELLE, *ARCHITECTS*



DETAIL OF MAIN ENTRANCE
HIGH SCHOOL, MORRISTOWN, N. J.
GUILBERT & BETELLE, *ARCHITECTS*



HIGH SCHOOL, MORRISTOWN, N. J.

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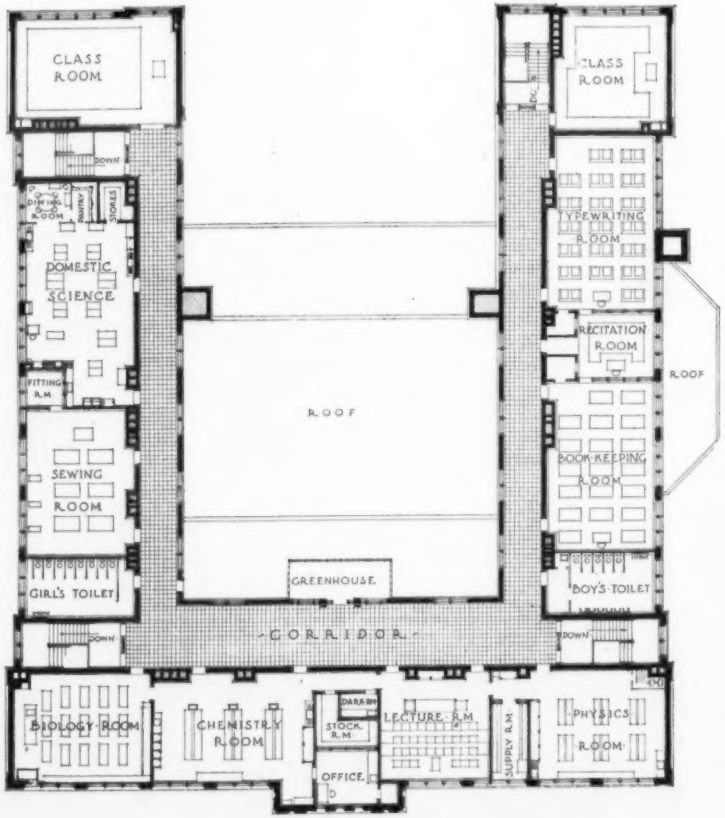
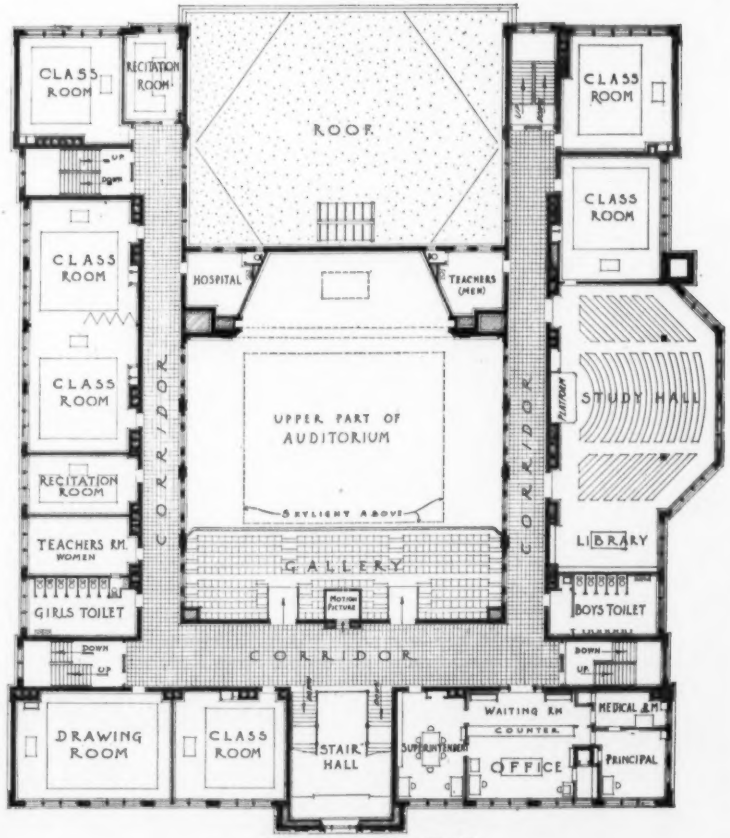


THIRD FLOOR PLAN



SECOND FLOOR PLAN

HIGH SCHOOL, MORRISTOWN, N. J.

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MOSES BIGELOW SCHOOL, NEWARK, N. J.

E. F. GUILBERT, *ARCHITECT*, OF THE FIRM OF GUILBERT & BETELLE

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DINING ROOM OF A HOUSE IN GLENRIDGE, N. J.
GUILBERT & BETELLE, *ARCHITECTS*

DINING ROOM OF A HOUSE IN GLENRIDGE, N. J.
GUILBERT & BETELLE, *ARCHITECTS*

Recent Legal Decisions

(Continued from page 790)

of by the contractor may be inferred from less significant circumstances than waiver on the part of the owner.

Under a building contract it was the duty of the contractor to furnish all material, and if there was any evidence of liens for which the owner might become liable, he had the right to retain an amount sufficient to indemnify him, and the contractor was bound to refund to the owner any money he might be compelled to pay in discharging liens. It was therefore the duty of the contractor to pay the materialmen, and the owner who paid the liens was subrogated to the materialmen's right to recover upon the contractor's bond. Karel v. Baster (Neb.), 170 N. W. 891.

The Connecticut Supreme Court of Errors holds, Ford v. Miles, 105 Atl. 443, that a covenant in a deed that the grantor should not construct buildings on land in front of a lot conveyed so as to interfere with a view of a bay, the lot conveyed being on a street intersecting a drive along the shore of the bay at an angle of 30 degrees, was a covenant not to construct a building on land between lines drawn at right angles to the drive along the shore, and not on land between lines drawn at right angles to the street on which the lot faced.

Ordinarily, the owner's measure of damage upon the contractor's failure to construct the building according to contract is the difference between the value of the building as constructed and its value if it had been constructed according to the contract, Where, however, the contractor wilfully varies from the contract by using materials not only different from those contracted for, but wholly unsuitable for the purpose, the true measure of damages is the actual cost of reconstructing the building according to the contract. Applying this rule, the Kentucky Court of Appeals holds, Young v. Cumberland County Educational Soc., 210 S. W. 494, that where soft and unsuitable brick were used in the outside walls instead of hard brick, as required by the contract, the measure of the owner's damages was the cost of removing the defective brick and putting hard brick in their stead.

An architect's contract was to furnish all necessary general drawings, specifications and details for the construction of a building upon a commission of 2½ per cent of the total cost. A claim that under such a contract the architect was only entitled to recover his commission on the cost of construction as far as the building had proceeded at the time his employment was terminated was not sustained. The actual construction and its cost were only material to him as fixing the amount of the owner's liability for the services rendered. Havens v. Donahue (1896), 111 Cal. 297.

In an action by an architect to recover a fee for services in remodeling a bank building, it appeared that he had made a written contract for an addition to the building, stipulating for 5 per cent on the cost of the work. During its progress it was decided to remodel the interior of the building, and the plaintiff was instructed to act as architect. There was no agreement as to compensation for this service, but the plaintiff testified he informed the bank's representatives he expected to be paid for his services in that particular kind of work. It was held that the rate paid in the original contract must prevail and the plaintiff could recover no higher rate. Osterling v. Allegheny Trust Co. (1918), 260 Pa. 64, 103 Atl. 528.

Building Restriction Covenants

The New Jersey Court of Errors and Appeals holds that whether or not a covenant that "no building shall be erected on said lot unless the front foundation wall of the said building is at least 75 feet from" the street is violated by the construction of a second-story sleeping porch upon the original one-story inclosed porch which rested upon three small cement piers, and which latter porch and piers, while in part within the restricted area, admittedly were not in violation of the covenant, is not so clear that a court of equity will aid in its enforcement. Marsh v. Marsh (N. J.), 106 Atl. 810.

Building Restrictions—Changed Conditions

The Michigan Supreme Court holds, Windermere-Grand I. & P. Assn. v. American State Bank, 172 N. W. 29, that where an unforeseen and radical change in the nature of a street from quiet suburban conditions to an exceptionally noisy street has defeated the object of restrictive covenants upon an owner's lot which had relation to protecting the home or dwelling house, a court of equity will not enjoin the owner from using the lot, made worthless for residential purposes, for the construction of a reinforced concrete and stone bank building. The right and equity of a chancery court to enforce restrictions is not absolute, and in the exercise of its jurisdiction the same general equitable consideration and rules are recognized as move the court in passing upon applications to compel specific performance of contracts.

Wasted Water Power

FEW people need to be reminded of the high cost of all commodities. If anything, the desire is to forget it as far as they may be permitted. But the fact remains that prodigality is a large contributing cause, and this is particularly true in the case of essential products and fundamental necessities. On these are based so many subsequent operations and processes that it is only reasonable to conserve what nature has given, with the end in view that costs shall be reduced and emergencies minimized. Take water power, for example. The following statements given out by *Engineering World* illustrate the present point:

Now that the people at large have had the experience of the great need of coal even for domestic purposes, when coal is an important factor in maintaining comfort and health, while unmined millions of tons of it are available, and while manpower to mine it is plentiful, these people may be able more adequately to comprehend the value of water-power development. Engineers and others engaged in the industries long have recognized its value and have urged on Congress the necessity of enacting legislation that would permit its development. But members of Congress, either because of a desire to curry political favor by alleging that the demand for water-power legislation has come from those seeking profit at public expense, or because of the nonsensical idea of obstructing progressive legislation as a means of embarrassing political opponents, or because of a lack of good judgment, consistently have refused to heed the advice of technical and business men and have refused the legislation. Computations show that, had enabling legislation providing for water-power development been enacted only five or ten years ago, the amount of that development that reasonably might be expected to have occurred would have prevented the coal shortages that existed during the war and during the recent strike.

The estimated bituminous coal output of the country during 1919 is 530,000,000 tons, about five tons per capita. Two-thirds of it was used for power purposes. During the past ten years the population has increased 40 per cent., while coal production is said to have increased 175 per cent. If the rate of commercial and industrial development is only as large during the next decade as it has been during the past, and the Nation's water-power resources are not developed, the coal output during 1930 must be approximately 1,500,000,000 tons. A coal strike then will be a calamity from which recovery may not be as rapid as it has been recently.

The estimated water-power resources of the country, irrespective of storage, amount to 60,000,000 horse-power. Of this amount 14,000,000 horse-power are of a private nature unaffected by legislation, whereas 46,000,000 horse-power are on public lands or navigable streams and are subject to restrictions imposed by Congress. Of the private resources 25 per cent. are developed, whereas of the 46,000,000 horse-power on the public domain only 4 per cent. are developed and serviceable to mankind. The other 96 per cent., 44,000,000 horse-power, more than enough power to supply all of the industries of this country that use bituminous coal, are wasted!

Engineers estimate that, if power development legislation had been enacted five years ago, 20 per cent. of the water-power supply under public regulation, 10,000,000 horse-power, would be available for use instead of the present 2,000,000 horse-power. This amount of power from energy abstracted from the forces of nature would have nullified the effect of the recent coal strike. With the average coal consumption per horse-power per year estimated at 6 tons, the annual saving of coal because of the 10,000,000 horse-power of water-power would be 60,000,000 tons, to mine, haul and handle which require the service of approximately 150,000 men, 100,000 freight cars, and 5,000 locomotives. If all of the available water-power of the country were developed, it would save 360,000,000 tons of coal annually, an amount of coal somewhat larger than the total amount of bituminous coal used in the country during 1919.

Water-power legislation should surely be enacted, and, while it is in its embryo stage, a word should be given to remind legislators that while this country wants to get the maximum material benefit from its natural resources, it also wants to preserve as far as possible all its natural beauties. An effort should be made to keep both objects in mind simultaneously—not to forego either for the sake of the other, but effect a compromise that will satisfy all.

Current News

Happenings and Comment in the Fields of Architecture and the Allied Arts

Art Associations to Build a Home

A proposal to build another home for art, with lecture rooms and exhibition galleries, found a warm welcome at a conference of six artists' associations in the Pennsylvania Hotel when it was announced that the Art Centre, Inc., had received its papers of incorporation and that $250,000 capital would be raised in $10 shares for the purchase and remodelling of two or three houses in the Forties or Fifties, between Sixth and Lexington avenues. Cass Gilbert presided.

The idea is to provide a headquarters for the various art societies professionally related to the industries, to give these societies a central place in which to exhibit their work, salesrooms to facilitate its sale, staff and organization rooms, and all the other arrangements of space that add to the convenience and economy of carrying on co-ordinated effort in any specific field of activity.

Such a building has been needed before, but never so urgently as now. For the first time in the history of America art is widely recognized as an industrial asset, to be encouraged, to be sought, and to be bought, not only by connoisseurs and people of highly cultivated taste, but by manufacturers who must compete with others not merely in the quantity and soundness of their output, but in its attractiveness.

The organizations represented in the formation of the Art Centre are the American Institute of Graphic Art, Art Alliance of America, National Society of Craftsmen, Pictorial Photographers of America, Society of Illustrators and Society of Jewish Designers.

Fine Arts School at University of Pennsylvania

A new School of Fine Arts has been created at the University of Pennsylvania and is expected to open next Fall. It will consist of the department of architecture, now included in the Towne Scientific School; the department of music and the group of fine arts studies now in the college and graduate school. The faculty of the new school will be composed of the faculties now teaching those subjects. As Pennsylvania has been a leading architectural school of the country, it is the belief of the trustees that the new school will immediately take rank as the first in America.

Under the new arrangement there will be both professional courses, leading to appropriate degrees, and courses in the history and appreciation of the fine arts, leading to the degree of bachelor of fine arts.

The establishment of this school will make possible, through co-operation with other art schools, the creation of professional departments of painting, sculpture, etc. That system of co-operation will enable the young painter or sculptor to secure a broad academic training while he is pursuing his professional studies in the arts school.

The new course was suggested and worked out by Charles L. Borie, Jr., architect, and a member of the board of trustees; Dr. Warren Powers Laird, director of the school of architecture; Professor Paul Cret, professor of design, and W. P. Robins, the last three being members of the faculty in architecture.

Painting the Landscape

A new idea in gardening is being developed by persons of wealth in many parts of the country. This is to plant flowering shrubs in such quantities across rolling fields that the spread of bloom is a part of the view. It is called "painting the landscape" and considerable beauty in the aspect of the countryside may thereby be obtained.

A careful selection of shrubs will keep some part of the scene flooded with color throughout the year.

Lilacs are grown in such quantities, spread over a hillside, that the whole neighborhood is perfumed when the lilacs are blooming.

Lilacs growing naturally look very different from the trimmed shrub ordinarily exhibited. A bush shapes itself into a floral mound, with blossoms clear up from the ground.

Effects less pretentious, but no less satisfying, are within the reach of all; at least all who live in towns where there is more than elbow room, or at the outer edge of a city.

View of a long board fence or other ugly prospect can be transformed by a row of hollyhocks or other flowering plants or shrubs; even by a row of sunflowers!

Inter-Racial Council Considers Safeguards for Immigration

The United States has a tremendous amount of work to do, Europe has a great many hundreds of thousands of idle men, hungry, homeless and despairing. They and their dependents must be fed, and the only nation with granaries large enough to feed them and itself is the United States. Why, then, should American food be transported far across the Atlantic to feed idle men when the men themselves, with their families, could be just as easily transported to America where they could be fed and housed while at the same time retaining their self-respect by earning good wages with which to pay for their keep and to provide for their future?

This is the subject to which the Inter-racial Council is devoted. The United States lacks 4,000,000 workmen who in the natural course of events would have emigrated from Europe and would have settled here but for the war and its interruptions. Our former common laborers have been separated forever, probably, from their old occupations through being drawn into war work and now have no desire to return to the unskilled labor class. Who is to take their places in performing the absolutely necessary day labor, not only in the steel mills, building construction, etc., but also in all lines of human endeavor?

But several things stand in the way of this restoration. One is the literacy test of our present immigration laws, put on the statute books at the behest of trade union leaders who shrewdly saw created thereby a shortage of immigrant labor. The New York council, however, in a series of striking resolutions, proposes the repeal of this literacy test, but in its place is suggested the creation of a Federal bureau of assimilation, "charged with the duty of co-ordinating all existing governmental activities relating to immigration, of facilitating the safe and expeditious distribution of immigrants arriving here to their several destinations, of supplying them with information and assistance in respect to the securing of employment in those industries for which they are best adapted, of affording them instruction in the English language and in the history, customs and institutions of our country, of protecting them against fraud, extortion and exploitation, of making them feel that they are not strangers in a strange land and of providing for co-operation by the several branches of the Federal, State and municipal governments and by appropriate civic agencies for inducting them into the life of the nation."

This would certainly be an improvement over the present brusque, cold and formal immigration service. This nation's wartime experience with some immigrants, who forgot all too quickly allegiance to their adopted country and clung to the decaying and dying "fatherlands," must never be repeated. Provision as proposed by this council's resolutions must be made for the assimilation of future immigrants. Much more loyal and patriotic material by the hundreds of thousands went into the American army with its cosmopolitan mixture of foreign names, but every one of the wearers of the American khaki was a patriot, if not when he went into the army, then when he came out.

Our Federal Government is big, broad and rich enough to carry out such a comprehensive scheme of immigrant assimilation. It must be done some way and at some future time. It is not enough to wait for another war and its army training to give these men their opportunity. They ought to have it now, and devoid of the military side of the affair. They have had enough and to spare of military training. They are needed in the mills, the farms, the shops and the thousand and one other American industrial commercial activities that are starving for want of workmen. These workmen, not the products of their old country skill, are demanded imperatively.

Profiteers After Mark Twain's Home

Mark Twain's home is a cherished landmark of Hartford, Conn., and should be preserved for the sentiment attached to it.

The officers of the Hartford Art Society have manifested a desire to buy the historic place—the home in which "Innocents Abroad" was written, and which is one of the oldest buildings in New England. The kitchen is on the top floor of the house, and the stairways are on the outside. The famous humorist liked the arrangements of the culinary apartments, for the kitchen force could "see the parades and funerals" without running through the house.

It was, however, acquired a few months ago by private interests at $55,000 and the present owners are asking $500,000. There is a question as to whether the money can be raised. The State Park Commission is about to condemn the landmark and use the ground for a State Park.

Lovers of Huckleberry Finn and other creations of Clemens are becoming aroused and from different parts of the country are coming generous offers of financial aid. It is believed that if the Hartford Art Society will make an energetic effort, three hundred thousand dollars or more can be raised for a sentimental but laudable purpose.

But the two speculators—the undertaker and the real estate man—should show some liberality and

civic pride and drop their price at least one hundred and fifty thousand dollars. It might pay them in the end, for if the Park Commission condemns the property, the owners would receive only the appraised value, which would be less than fifty-five thousand dollars.

Good Roads, Past and Future

In an interesting discussion of present tendencies in our country's progress, J. Ogden Armour has set forth a terse account of the development of roads from the time of the old Romans and up to the present day. He states:

The country is entering a period of road-building. Projects which were planned during the war are being put into effect. The Federal Government has made large appropriations, to be spent conjointly with appropriations by the various States. Good roads have become a watchword of post-war progress.

There is occasion for reflection in the fact that the greatest of ancient empires was conspicuous for its road-building. The Roman roads were the railways and telegraph of an age that did not know steam and electricity. They were the pathways of the imperial couriers and the imperial legions. These roads were the girders that held the empire together. It is customary, today, to admire the Romans for their practical sagacity, nowhere better exemplified than in their road-building.

In a manner, "history repeats itself" in our newly bestirred zeal for constructing good highways. What to the Romans was a national necessity, has become for us an urgent need; and this, by virtue of a modern invention—the motor car. I look for much advancement to grow out of the "motor age;" and I am certain that this advancement will be contingent upon the attention we give to the improvement of our roads.

Those of us who have made observations for two decades have seen wondrous changes resulting directly from the use of the pleasure automobile. Once the city was the city, and the country was the country. Today they merge into one another. The city man knows the country as never before—is glad to have access to it and to live in it when possible. The countryman knows the city and frequents it often. Small villages of yesterday have become the rural metropolis that one finds here and there, everywhere. This is all good, for it is well that a nation be knit together in the spirit of mutual understanding and in a reciprocity of advantages.

But there are better arguments for good roads than those which apply merely to the passenger car. We are told, on the authority of the Government, that farmers lose $300,000,000 yearly in marketing their crops, because of bad roads. This is too much to waste. We should contemplate this figure in connection with the high cost of living.

There is no more serious problem before us today than the matter of reducing the cost of getting the products of the farm to the table of the consumer. One step, at least, in the solution, is plain—better roads.

As an instrument of economy the motor truck has not yet come into its own. Efficient servant as it is in certain restricted realms, it now awaits the further development of interurban and country highways to reach the measure of its full attainment. It has power and speed that put it outside the class of the horse-drawn vehicle, and a nimbleness and flexibility which give it certain advantages over the railways. It is my expectation to see it assume more and more the function of the "short haul" as its own peculiar province; in part relieving the railways of those duties which they are least able to perform; and in part, expanding the field of our national transportation system.

I say, therefore, all speed to the good roads movement! It will cheapen our methods of distribution and help to bring the people of our country closer to each other. I commend its common sense and practical wisdom. It may be less spectacular than some of our other national issues, but it strikes deep into the roots of fundamental progress.

Illinois Chapter of A. I. A.

The annual meeting was held June 8, and officers were elected as follows:

Henry K. Holsman, president; Albert M. Saxe, first vice-president; Francis W. Puckey, second vice-president; Richard E. Schmidt, treasurer; Edwin H. Clark, secretary; John A. Nyden and John A. Holabird, directors for two years.

Mr. Ross Crane of the Art Institute gave an interesting illustrated address on the "Extension Work of the Art Institute" in behalf of the better housing campaign, telling how its representatves visit towns and small cities where they give a series of lectures and exhibits of plans, photographs and lantern slides. The range embraces farm houses, small dwellings, kitchen and utility apparatus, interior decoration and furniture, and landscape gardening. The lectures are paid for by local boards of trade or chambers of commerce. The demand for these lectures is increasing and new crews are being organized.

Mr. Crane spoke highly of the work of the Minnesota Chapter and said that the small house problem was the most important problem before the architect, owing to the necessity for good housing to overcome the present unrest.

Of the committee reports, that of the Legislative Committee was most interesting. This is a joint committee with the Illinois Society of Architects. Several important amendments were made to the building code and others are still under consideration. It shows the influence of well organized architects on legislation affecting the building industry and necessarily architecture. This is probably the most active chapter in the United States, in taking part in public affairs, and demonstrate that architects can be an influential factor in civic affairs if properly organized with efficient officers and committees.

Personals

Ralph H. Cemeron has removed his offices from 606 Frost Building to 1115-6 Central Trust Building, San Antonio, Texas.

Chester H. Walcott, architect, is now located at 8 East Huron street, Chicago, having removed from 76 West Monroe street.

Wm. Newton Diehl, architect, formerly of Newport News, Va., has removed to 52 Virginia-Carolina Building, Norfolk, Va.

Hawk & Parr, architects, have moved their offices from 501 Security Building to 101 Magnolia Building, Oklahoma City, Okla.

John F. Jackson has moved his offices and is now practicing architecture in his own building at 141 East 45th street, New York.

J. N. Tilton, architect, announces the removed of his office from 226 South La Salle street to 5 North La Salle street, Chicago.

R. Spencer Soule has resumed the general practice of architecture, after two years' war service, at 429-A Carondelet street, New Orleans.

Elmer J. Welch, architect, located at 427 Williams street, Norfolk, Va., has made a request for manufacturers' catalogues and samples.

S. Wesley Haynes, architect, has removed from Leominster, Mass., and has opened new offices in rooms 28-29 Park Building, Fitchburg, Mass.

Robert Frank Jordan, architect, formerly of Baltimore, Md., has removed to Wilmington, N. C., and become associated with the W. J. Wilkins Co.

News from Various Sources

Barcelona's industrial exposition, which was planned to be held during 1920, has been postponed and the organizers hope now to be able to arrange it for 1923.

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Ten years ago William C. Durant would have bought the Ford Motor Company for $8,000,000, but Wall Street wouldn't lend him the money. About forty times that amount would be the discussion price today.

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Rheims is to have a new and modern hotel, constructed by the Société Porte-Mars in the boulevard Louis-Roederer, and which is to have 300 rooms. The capitalization is 3,000,000 francs.

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Sixty-five per cent. of all the acreage farmed in California now is being cultivated by gasoline or steam propelled tractor, and it is estimated that in the hauling of produce from California ranches the percentage is close to 85 per cent.

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Boston is ambitious of becoming the world's greatest wool market. The number of textile mills in New England renders Boston natural headquarters for the handling of wool. A cargo of wool valued at $10,000,000 arrived recently at Boston from Australia.

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Princeton University has added to the courses of study of the institution a course in architecture leading to the degree of A. B. after four years of study and the professional degree after two additional years of post-graduate work.

* * * * *

Every ton of waste paper that can be substituted in paper manufacture will save eight trees of mature growth required to produce a ton of wood pulp and we are sending annually to the dump 150,000 tons of waste paper representing substituted power for at least 1,200,000 trees of mature growth, says the Waste Reclamation Service of the Department of Commerce, in urging a more extensive use of waste paper as raw material in paper manufacture.

* * * * *

Zurich, in Switzerland, has a communal forest of about 2,800 acres that yields an income to the community of about $20,000 a year, according to American Forestry Association experts. This income of approximately $7 an acre is derived chiefly from the sale of firewood. It would seem that it would be a good business proposition for American towns to establish public wood lots.

Weekly Review of Construction Field

Comment on General Conditions of Economics With Reports of Special Correspondents in Prominent Regional Centers

THERE has been no actual establishment of priorities by the Interstate Commerce Commission in regard to freight movement. It would be well if priorities are to be established that they be openly established and the case of each industry be settled on its merits. As the movement of freight (or rather the lack of such movement) is upsetting all building plans, the entire building fraternity from the materials manufacturer to the builder should make plain their needs to those at Washington who apparently would solve the situation by geographical distribution. Trainloads of empty box cars are being shipped westward (into the grain country) and the shortage for industrial uses is increased. The public has been educated of the fact that it must pay higher freight rates. We are all of us ready and willing to agree that the railroads need increased revenues; but should we not insist upon getting something for them?

A conference of those interested in intercity cartage by motor truck is to be held in Chicago June 26 with the purpose of organizing a national association. It is stated by those directing the movement that they hope to place the cartage industry on a basis where it can relieve the pressure on other methods of moving commodities where the older established arteries are now overtaxed. Possibly something may be hoped for in the development of this method of transportation. At any rate, it is the only kind we've got just now.

A report from Detroit estimates that 25,000 men are idle in that city because of the enforced curtailment of production. The report adds that 10,000 building trades employees are out on strike and there are 15,000 "floaters" who wouldn't be working anyway.

(By Special Correspondence to THE AMERICAN ARCHITECT)

CHICAGO.—The recent wage increase demanded and received by the building trades of Chicago has already proven a boomerang for the skilled workmen in the industry. By boosting his wages higher than almost anywhere in the country, he has attracted outside labor to Chicago and thus helped to create a glut in the labor of his own industry.

According to those in close touch with the situation, the $1.25 per hour for skilled mechanics and $1.00 for common labor has attracted hundreds of outsiders, thrown out of employment through the transportation break-down, into this section. Men who formerly worked as brakemen and switchmen are now entering other fields and this has increased the labor supply in this particular field; contractors report competition among these former rail men for jobs.

This, it is explained, has resulted in increasing the output of the workers from 10 to 20 per cent over that of three months ago, bearing out the statement of builders who have contended that higher wages and labor scarcity always mean lowered output per man, while increased labor supply—meaning competition for jobs—brings more nearly normal production.

Small contractors here are hampered in their inability to borrow money because of credit restrictions. This has resulted in the temporary abandonment of many bungalows and small flat buildings scattered through the Chicago suburban districts which are really needed to relieve the housing situation. Demands are being made both of the banks and the railroads that the building industry should be placed on the essential list as to loans and transportation. Movement of building materials is still below normal because of car shortage. Broadly speaking, however, the advanced rediscount rate recently put into effect by the local Reserve Bank has had little effect on loan expansion.

Building permits in Chicago for the week ended June 5 were for 25 structures representing an outlay of $709,300; compared with 90 structures for the corresponding week last year with an expenditure of $1,218,685.

(By Special Correspondence to THE AMERICAN ARCHITECT)

SAN FRANCISCO.—The fact that two building permits call for an expenditure of $2,500,000 during the month of May brings the record of that month up to $3,879,000. This is the largest amount of permits issued in the city for any one month during five years' time. The two buildings to be built at once are the fifteen-story office building, at Montgomery and Pine Streets, and the Grenada Theater, at Market and Jones Streets.

The City Planning Commission is urging a zone ordinance for the regulation and establishment of locations for trades and industries, dwellings and other buildings designed for special purposes. The proposed ordinance will change the physical appearance of many sections of the city in a few years, if enforced as now drawn.

Building materials showed no changes in price this week. Reflecting the recent cut in lumber prices

here, information comes from Oregon of radical cuts made in that State. Difficulty in making shipments by rail is also complained of by the northern mills, and this is given as the principal reason for the lower prices in that territory.

In Portland the need for more houses for the people living there has resulted in an agreement by the City Council for changes in the building code permitting the erection of cheap houses, and a large number of low-priced houses will be erected in the near future. These will not add to the architectural beauty of Portland, but they will satisfy a pressing need.

(By Special Correspondence to THE AMERICAN ARCHITECT)

SEATTLE.—Searching for the most difficult problem in the building materials market today, North Coast jobbers have hit upon the car situation, and convinced that past shortages will look like a bounteous distribution in comparison with what is immediately at hand, they have begun to store such building materials as are now freely offering because of a quiet period in building commitments.

Carload lots of cement, plaster, patent roofing and all essentials that arrive by rail are now warehoused. There has been a plentiful supply of these materials during the past thirty days and jobbers have had no difficulty in getting ample offerings. Fears of these jobbers may prove to be groundless, but they frankly say that the problem of distribution is more critical today than finance.

There is probably no single item of building materials that can be reported higher this week. Difficulty of getting stock from the East is growing more pronounced, especially in steel pipe, radiation and nails. Jobbers unhesitatingly declare that due to the intermittent and undependable car supply, their profits are being sacrificed to a degree never before known. Production at eastern mills, particularly in the intermountain districts, is being vitally curtailed because of inexperienced labor. Manufacturers say it is a difficult thing to educate men who can do the finer grade of work successfully. One plant reports to jobbers here that it has been compelled to install sixty new nail machines because of destruction wrought by raw labor.

Nails are still being rationed. Eastern manufacturers advised in May that the June 1 and later production and delivery would be 50 per cent of normal —but to date it has not exceeded 25 per cent.

Wrought and galvanized pipe is scarce. Manufacturers assert that they cannot get raw materials and are allotting shipment on the basis of business done for the corresponding period last year.

Fir lumber prices, with the announcement this week by one of the larger representative mills of a cut of $4 on common and $5 on uppers, has sounded the bottom of the market, and a turn is now expected, according to all branches of the trade. This list quotes to the trade No. 1 common dimension at $24.50, boards, $28; vertical grain flooring, $64; slash grain flooring, $54; drop siding, $51, and ceiling, $48. The mill that takes the cut has 80,000,000 feet of stock ready for immediate delivery. Red cedar shingles are stronger, coast loading at $5.25 for clears and $4.10 to $4.20 for start.

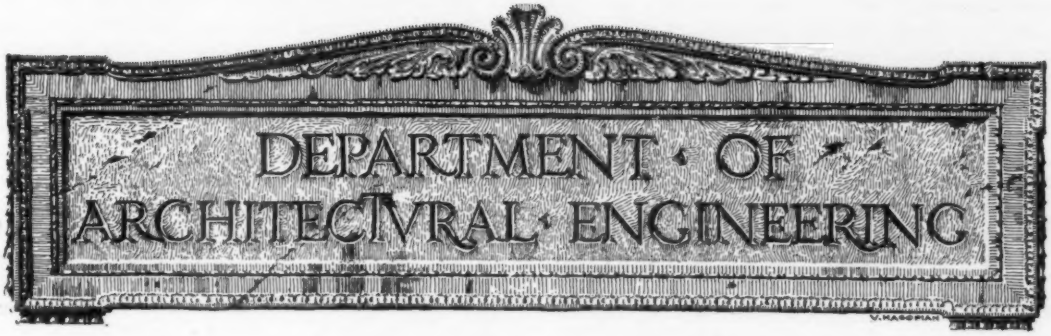
(By Special Correspondence to THE AMERICAN ARCHITECT)

BOSTON.—While business conditions continue very much disturbed as a result of the tense credit situation and the tangled transportation condition, it is noticeable that there is less calamity talk in business circles than a fortnight ago, and indeed in some quarters signs which are very encouraging for the future are appearing.

In the retail trade conditions are very much confused. Many merchants who bought goods in quantity some time ago are feeling the pressure of the banks to reduce their loans. The mark-down sales are the natural result and even those who are not pressed by the banks are compelled to follow that example by the pressure of competition. This uncertainty and unsettlement in the retail trade is reflecting on the industrial field with a general tendency to curtail new purchases. But taking a broad view of the situation there is reason to believe that the factors which caused the disruption in business are improving. It is believed that when the smoke clears away it will be found that there will be still a tremendous unfilled demand for goods, the supply of which will ensure the operation for factories for a long time to come.

The building of apartments, which has been at a standstill, is slowly getting under way again. In one section of Boston an eight-story building containing 200 apartments has just been started while land for another to contain 300 apartments has been secured.

Statistics of building and engineering operations in New England show that contracts awarded from January 1 to June 10, 1920, amounted to $157,509,000 as against $67,295,000 for a corresponding period in 1919, $64,867,000 in 1918, $87,534,000 in 1917, $86,685,000 in 1916, and $72,814,000 in 1915.



A Study of the Practicability of Spray Painting*

By HENRY A. GARDNER

THE war placed such great demands upon the painting industry that it was found necessary to utilize every means to accomplish the huge painting program that developed. The shortage of men capable of wielding brushes soon became apparent and the great speed demanded in production developed as a vital factor. As a result, the steel hulls of many vessels, the rough siding of many temporary buildings, and the surfaces of thousands of guns, tractors, and other military equipment were coated by the spray machine. Because of the speed obtained through the use of this device for preserving or camouflaging materials of warfare, attempts have been made to develop it for peace time painting purposes. To many observers the question has come as to whether the machine is of sufficient practical value to merit a permanent place in the art of painting and whether it will to any extent replace the old-time hand paint brush.

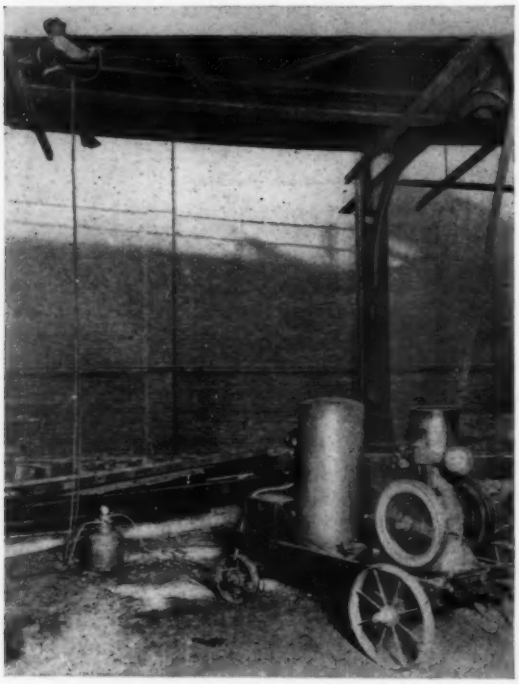
Some observers have stated that hand-brush manufacturers cannot produce sufficient brushes to apply the paint for which such great demands exist. While the apparent shortage of bristles might to some extent be held responsible for such a situation, it has been suggested that even though bristles were as plentiful as at any time previous to the war, it would be difficult for manufacturers to produce an over-abundance of brushes for coming needs, and that the brush industry could not therefore be injured through the development of the spray-painting machine.

Similarly it has been advanced that the occupation of the journeyman painter could not in any way be injured by the adoption of spray painting for certain special classes of work, since it is often impossible to obtain sufficient labor to apply the paint for which such enormously increased demands exist. Furthermore, it has been claimed that unless some means is provided for at least partially relieving the situation, millions of dollars of loss may result from the surface decay that will take place on unpainted structures. It is undoubtedly true that painting was neglected to such an extent during the war period that immediate action must now be taken to preserve the property that will otherwise be damaged if longer left unpainted. This means that during coming years an even greater demand will develop for paint and varnish products. Any legitimate and satisfactory means for the application of these products should therefore be welcomed not only by the master painter but by the journeyman painter and the public. The use, for instance, of the spray machine (if found practicable) will not only be of service to the property owner but will actually stimulate the employment of and demand for painting labor. To make this more clear, it has been suggested that a comparison of the situation be drawn with the effect of the sewing machine upon the tailoring industry. The journeyman tailor undoubtedly at first looked askance at the development of such a machine. It was soon found, however, that this machine created an almost entirely new industry in the production of ready-made clothing. The availability of these products at once effected a great demand and increased usage. As a result, thousands of operators were required where but hundreds were employed before.

It is believed, therefore, that any device that

* Presented at the 1920 convention of the International Association of Master House Painters and Decorators of the United States and Canada.

creates new business in new fields is to be given the hearty support of all, if found to be of a practical nature. Whether or not the machine will prove useful will depend upon the results obtained by the painter during the coming period of great activity



APPLYING PAINT TO THE STEELWORK OF AN ELEVATED RAILWAY STRUCTURE BY SPRAYING

in his trade. He may, for instance, find it well suited for certain classes of work and unsatisfactory for other kinds.

Some observations made by the writer on tests with the spray painting machine may be of interest in judging of its possible usefulness. The tests described below were made on large surfaces with both hand brushes and spray machines. After a sufficient period of exposure, data will be available as to the comparative durability of each type of work.

Spray Paint Tests at Washington

The tests referred to were made in Washington on Government buildings by a prominent member of the International Association of Master House Painters and Decorators of the United States and Canada. The machine used in the experiments consisted of a 4 horsepower motor, a large air tank, and a 5-gallon paint tank. It required 220-volt direct current. For the roof work the paint tank was hoisted to the roof and two hose leaders were carried from the air tank located on the ground. Two operators could work at the same time with the paint tank which was fitted with two spray guns.

For the exterior work an experienced spray brush operator started the work on one side of the building, and two journeymen with 4½-inch hand brushes started the work on the other side, which was a duplicate in size, shape and construction of the side selected for the spray test. After the work had been started a journeyman painter entirely unfamiliar with the use of the spray gun was shown how to operate it. He completed the tests, including the walls and roof area. It was apparent that a very short period of time was required to instruct a man to use a spray gun. The tests were of good size and included on the side walls an area of over 8,000 feet and on the roof an area of nearly 9,000 feet.

The paint used for the exterior wall work was a lead paint tinted with ochre, weighing 17.6 lbs. per gallon for the first coat and 20 lbs. per gallon for the second coat. Both paints were easily handled by the spray gun. The paint used on the roof was an oxide of iron paint weighing about 14 lbs. per gallon. The paint used for the interior work was a

IMPROVING THE APPEARANCE OF A COMMON BRICK FACTORY WALL
Spray painting is especially adapted to such work

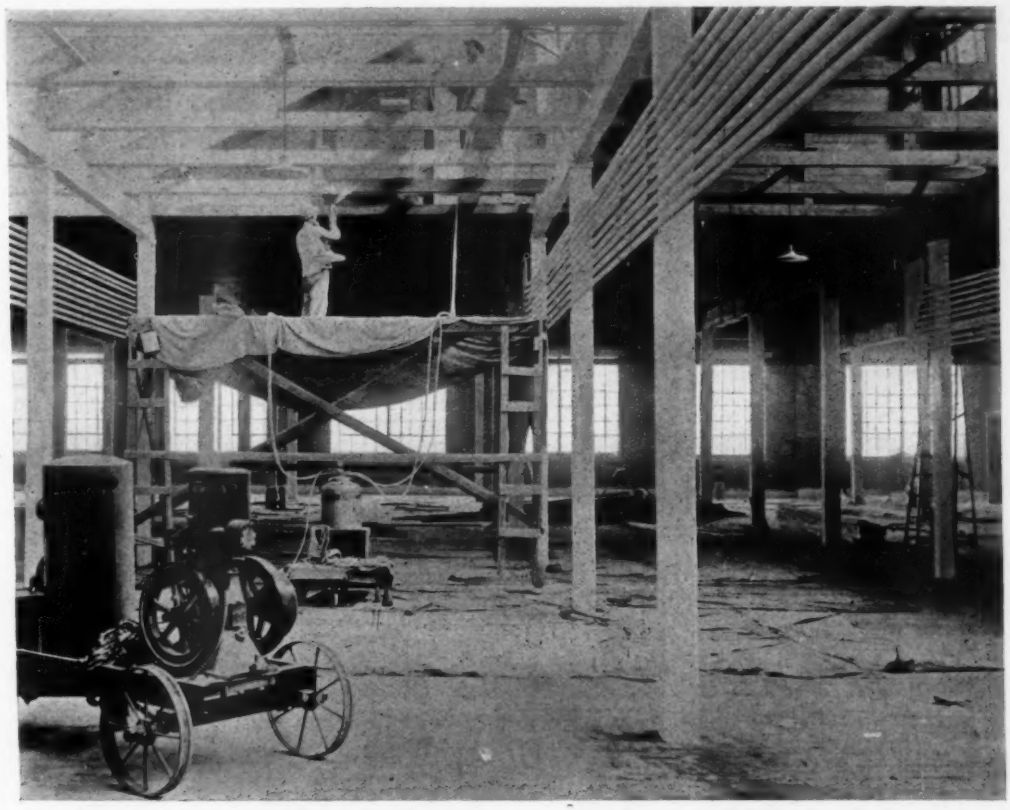
modern sanitary flat wall paint of the lithopone type, weighing 14 lbs. per gallon. It was apparent that the spray gun would successfully handle paint of practically any weight per gallon.

In doing the first coat on the exterior brick walls,

all cornices and trim were cut in with the spray on the side of the building where the spray test was made. On the second coat, however, the cornices were cut in by hand with a brush, in order to assure a neat job. The time of the brush work was counted in as spray-gun time.

It has previously been assumed that the average journeyman painter, working on wall surfaces and using a hand paint-brush would do about 200 square feet an hour, or about 250 square feet an hour on roof work. It will be noted in the accompanying tables that apparently much greater speed was attained in the hand-brush work. It is assumed that this was due to the great interest of the painters in the test.

Observation of the completed work showed that practically no difference in the appearance of the spray and the hand-brush work existed, with the exception that the spray work was slightly more opaque. The painters in applying the paint by hand with 4½-inch brushes used drop cloths at the base of their work, whereas no drop cloths were used by the spray workmen. There was apparently little paint falling to the ground, the only loss being in the form of a fine mist. On a damp day this mist, of course, would be greatly intensified due to the presence of the volatile constituents of the thinner. This mist would lead an observer to believe that considerable paint was being lost, whereas, as a matter of fact, only a very little quantity of paint was being dissipated as mist. The mist was of a somewhat colloidal character and the effect was largely optical. On the interior work, however, a noticeable difference was shown. The mist in the room where the paint was being applied by spray guns was very noticeable. Drop cloths were required on the floors in order to prevent staining. Painters employed for continuous periods on interior spray work might to advantage wear a simple form or respirator. The roof work was, of course, subjected to strong currents of air, but there was apparently no very large loss of paint. It was observed, however, that the overalls of the painters using the spray gun became somewhat more soiled than where



SPRAY PAINTING A FACTORY CEILING

SPRAY PAINTING A SHINGLE ROOF
Such surfaces often prove difficult for brush work

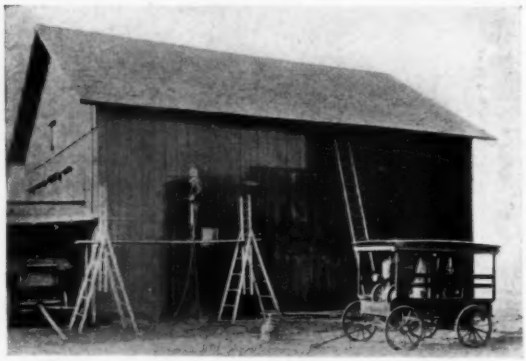
hand-brush work was being done on similar work.

On the interior tests, one room was done by two painters with hand brushes and two rooms with the spray gun by one operator. The rooms faced a courtyard in which the machine was placed with hose leaders running up to the work. The ceilings of the rooms were arched, four arches meeting in the centre of each. This made the painting rather difficult by hand but very much easier for spray work. The side walls had four projecting columns, one at each corner, and between the tops of these columns and the arched ceiling there was a heavy scroll cornice. Each room also had a fireplace and chimney breast and large recessed combination windows. The hand work was somewhat marred by streaks and the covering was poor. The spray work was greatly superior. A very much heavier coating of paint was apparently applied. It was necessary to put on two coats of paint by the hand brush in some instances in order to get satisfactory covering.

Information gathered from some of the journeymen painters indicate that they are not averse to the use of the spray gun after they become acquainted with it. In fact, the painters showed less fatigue at night than when using hand brushes. Some were therefore enthusiastic about its use.

EXTERIOR WORK
Previously Painted Metal Roof

	Area of Surface Square Feet	Paint Used Gallons	Time 1 Man Hours
Spraying	578	1.49	.5 (½)
Brushing	578	1.35	1.5 (1½)
Results Calculated to 10,000 Sq. Ft.			
Spraying	10,000	25.8	8.6
Brushing	10,000	23.3	25.9



BETTER FARM BUILDINGS OFTEN MEAN PAINTED BUILDINGS
Rapid work can be done with a spray machine on large flat surfaces such as here shown

Comparative Cost of 10,000 Square Feet of Work

Spraying	25.8 gallons Paint at $4.00		$103.20
	8.6 hours Labor at .90		7.74
			$110.94
Brushing	23.3 gallons Paint at $4.00		$93.20
	25.9 hours Labor at .90		23.31
			$116.51

SPRAYING REQUIRES APPROXIMATELY 10% MORE PAINT THAN BRUSHING.

BRUSHING REQUIRES APPROXIMATELY 200% MORE LABOR THAN SPRAYING.

AN EXCELLENT WAY TO PAINT ROUGH CAST CEMENT STUCCO

EXTERIOR WORK
Previously Painted Brick Walls and Stone Cornice

	Area of Surface Square Feet	Paint Used Gallons	Time 1 Man Hours
Spraying	8,364	10.8	20.
Brushing	8,188	9.87	41.
Results Calculated to 10,000 Sq. Ft.			
Spraying	10,000	12.90	23.9
Brushing	10,000	12.05	50.

Comparative Cost of 10,000 Square Feet of Work

Spraying	12.90 gallons Paint at $4.00		$51.60
	23.9 hours Labor at .90		21.51
			$73.11

SPRAYING METHOD APPLIED TO SPRING HOUSE PAINTING

Brushing	12.05 gallons	Paint at $4.00	$48.20
	50 hours	Labor at .90	45.00
			$93.20

SPRAYING REQUIRED APPROXIMATELY 7% MORE PAINT THAN BRUSHING.

BRUSHING REQUIRED APPROXIMATELY 109% MORE LABOR THAN SPRAYING.

INTERIOR WORK

Combined Ceilings and Walls of Plaster

	Area of Surface Square Feet	Paint Used Gallons	Time 1 Man Hours
Spraying	2,600	6.39	5.33 (5⅓)
Brushing	1,000	1.75	5.33 (5⅓)
Results Calculated to 10,000 Sq. Ft.			
Spraying	10,000	24.5	20.5
Brushing	10,000	17.5	53.3

PROLONGING THE LIFE OF THE "BLEACHERS" BY SPRAY PAINTING

Comparative Cost of 10,000 Square Feet of Work

Spraying	24.5 gallons	Paint at $4.00	$98.00
	20.5 hours	Labor at .90	18.45
			$116.45
Brushing	17.5 gallons	Paint at $4.00	$70.00
	53.3 hours	Labor at .90	47.97
			$117.97

SPRAYING REQUIRED APPROXIMATELY 40% MORE PAINT THAN BRUSHING BUT GAVE QUITE GOOD HIDING IN ONE COAT.

BRUSHING REQUIRED APPROXIMATELY 160% MORE LABOR THAN SPRAYING AND GAVE POOR HIDING IN ONE COAT.

Forest Products Laboratory to Hold Decennial Celebration July 22d and 23d

The Forest Products Laboratory, located at Madison, Wis., was organized by the United States Forest Service in 1909 and formally opened in June, 1910. It is conducted in co-operation with the University of Wisconsin.

During the ten years of its existence the efforts of the laboratory have been devoted to the development of improved methods and processes for the better utilization of forest products of all kinds, and to the direct assistance of the industries concerned.

During the war direct assistance was rendered the War and Navy Departments and various other branches of the Government in the solution of many important problems. It was necessary, throughout this period, to abandon all work on the regular peace time program.

A good many men acquainted with the work of the laboratory have expressed the thought that the laboratory and the service rendered by it should receive some mark of recognition or appreciation from the industries which it serves. In response to this thought, the decennial celebration has been planned, and the General Committee organized to carry out the detailed arrangements.

The present plans call for a two-day program, including addresses by men prominent in science, industry, and commerce; inspection of the laboratory; a banquet; and various other forms of instruction and entertainment. It is proposed to make a permanent record of the decennial in the form of a souvenir publication to contain all the addresses and other relevant matter, including the names of those who can permit a permanent record of their co-operative contributions to be made.

A hearty invitation to attend the celebration is extended by the Forest Products Laboratory to the readers of THE AMERICAN ARCHITECT.

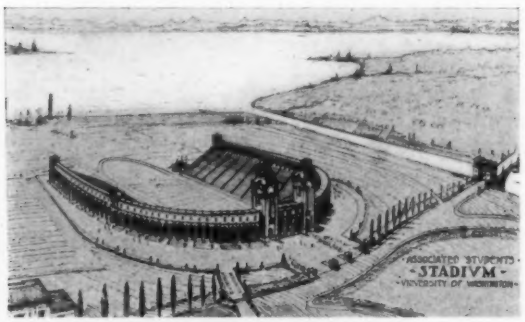
Proposed Code for Hollow Tile Construction

The Hollow Building Tile Association with offices in the Conway Building, Chicago, has just issued a 12-page pamphlet bearing the title "Standard Building Code" containing provisions governing building construction in hollow tile. Section 1 contains specifications relating to the quality of the product, and thickness of bearing and enclosure walls; Section 2 gives thicknesses of non-bearing walls and partitions; Section 3 deals with floor and roof arch construction and fireproofing in connection with structural steel; Section 4 with combined reinforced concrete and hollow tile floor construction and Section 5 with masonry bearing walls in general. This information will serve as a guide in localities where no building regulations are in force, and where existing codes do not deal specifically with hollow tile construction, the sections can be adopted with such modifications as might be deemed necessary as a part of the existing code.

Construction Work Starts on Huge Seattle Stadium

University of Washington to Possess Structure Rivaling Yale Bowl

A HUGE U-shaped concrete and steel stadium, matched in seating capacity only by the Yale Bowl, is now being built in Seattle on the University of Washington campus. The site is at the edge of Lake Washington on a spot where Siwash Indians less than fifty years ago held full sway. Some $500,000, almost the total estimated cost of the stadium, was recently raised in a period of less than one week. The day the last dollar was subscribed, earth was turned and a record in stadia construction will have been made when the stadium is open for the Dartmouth game November 28 of this year.



VIEW OF THE SEATTLE STADIUM AS IT WILL APPEAR WHEN COMPLETED

The stadium will cost approximately $600,000 and will seat about 60,000 persons. The open end of the U will face the lake, thus affording a view of the snow-capped Cascades in the distance. It will be accessible from four street car lines and four automobile highways. Through the Washington Canal and locks the stadium can be reached by water craft from Lakes Washington and Union and all of Puget Sound.

The Washington State University is now one of the ten largest educational institutions in the country. Its campus covers 400 acres, and is classed among the most beautiful in the United States. The stadium will be erected near the site of the athletic field used by the Alaska-Yukon-Pacific Exposition in 1909, and later rebuilt by the United States Naval Training Camp.

The structure will be built entirely of steel and concrete, and will rise above the surroundings as a monument of imposing dignity. Its architecture will conform with that of the new buildings on the university campus.

The height of the stadium from the field level will be 72 feet, with two great towers surmounting the main entrance at the bow of the U. The width from the exterior walls, including the field, will be 630 feet, and the length from the open end to the great towers will be 665 feet. A 25-foot colonnade covered with wide arches overlooking the field will flank the entire structure. The cantilever overhang will provide for an extra seating capacity of 13,000 persons.

The 60,000 seats will be constructed around a quarter-mile running track with a 220-yard straightway. The field will be large enough to hold football, baseball, track and other athletic contests, polo games, band concerts, May fêtes, pageants, carnivals, mass meetings, song fests, shows, fairs, military tournaments and all mass events for day or night. The size of the field will be 300 by 470 feet.

A minimum of 125,000 cubic yards of dirt will be excavated, which in turn will be used for the leveling of the great field. A thorough draining system will also be installed. Each seat will be of wood, raised above the concrete and affording space for passage behind the seated spectators.

Half of the structure will be above the ground level, with 28 runways passing from the exterior to the seat sections at midway points, so that the visitors may go up or down to their seats.

The easy accessibility of the building materials to be used will reduce the cost of construction nearly 20 per cent. Everything can be transported to the ground by water without extra hauling.

The Coliseum at Rome is the most widely known

structure of the amphitheatre type. It was a great four-story affair, enclosing an oval area, 176 by 280 feet. Its original seating capacity has been set at figures ranging from 50,000 to 87,000.

The Yale Bowl is in the form of a four-center oval, 750 feet by 930 feet from the faces of the outer walls, covering about 12½ acres of land. A continuous tier of seats entirely surrounds the field with thirty reinforced concrete tunnels giving access to the bowl.

The Palmer Memorial Stadium at Princeton has an exterior structure designed like an arcade, with two large towers 72 feet high at the curved ends. There are 26 runways extending from the exterior grade to the seating space.

The Harvard Stadium is a massive, imposing structure of steel and concrete, and suggests Roman types in construction and appearance. The total length is 570 feet and the total width over all 420 feet. The outer wall is 53 feet high, with two tiers of Roman arches and piers, separated by a molded belt course and surmounted with a parapet with massive cornice.

The Tacoma, Washington, Stadium was built for municipal purposes to entertain speakers and to use for high school athletic contests. It has admirably served the purpose. It is the only stadium of any size now constructed west of the Mississippi, and has made that city famous. It affords an excellent view of Puget Sound from the open end. The following is a list of stadia planned as well as those already constructed:

STADIA TO BE CONSTRUCTED

Date.		Seating Capacity.	Cost.
1920	University of Washington.	60,000	$600,000
1920	Los Angeles, Cal.....	50,000	800,000
1920	Ohio State University....	50,000	500,000
1920	Chicago Park Board.....	55,000	900,000

COMPLETED STADIA

1914	Yale Bowl.....	61,000	400,000
1914	Princeton Stadium.....	41,000	300,000
1910	Tacoma Stadium.....	30,000	175,000
1909	Harvard Stadium.....	50,000	330,000
——	Circus Maximus, Rome...	400,000	.....

A description of the construction of Yale Bowl may be found in the Transactions of the American Society of Civil Engineers, V. 81, p. 249; of the Princeton Stadium in the *Engineering News*, V. 72, p. 1184; *Engineering and Contracting*, V. 43, p. 472; *Engineering News-Record*, V. 70, p. 334; of the Tacoma Stadium in the *Engineering News-Record*, V. 62, p. 498; of the Harvard Stadium in the *Assoc. of Engineering Societies Journal*, V. 32, p. 293.

Engineers Lay Foundation for a National Federation

Organization Formed to Represent 100,000 Professional Men

ON June 3 and 4, 1920, 123 delegates representing 61 organizations whose aggregate membership includes in the neighborhood of 100,000 civil, mechanical, electrical, mining, heating, sanitary, chemical, agricultural, marine, refrigerating, radio, fire protection, automotive, industrial and military engineers, as well as some architects, marine architects and geologists assembled at Washington, D. C., to consider the advisability of organizing a national federation, capable of bringing the united efforts of the entire membership to a focus on any problem of mutual interest. After extended discussion The Conference decided to take such a course and adopted a resolution defining its object at the opening session. Following this action committees on constitution and by-laws, resolutions, and program were appointed. The report of the first-named committee was submitted to the delegates on the morning of June 4, and the constitution recommended by this committee was approved by The Conference in practically its original form.

The name of the new organization is "The Federated American Engineering Societies." Its object is "to further the interests of the public through the use of technical knowledge and engineering experience, and to consider and act upon matters common to the engineering and allied technical professions."

The membership will consist of national, local, State, and regional engineering and allied technical organizations and affiliations. The management of the organization is vested in a body designated as the American Engineering Council and an executive board of that body. The council is to consist of representatives of every member society. Each national, State, regional or local organization is entitled to one representative on the council for a membership of from 100 to 1,000 inclusive, and one additional representative for every additional 1,000 members or major fraction thereof. The duties of the council are to co-ordinate the activities of State councils and of local affiliations whenever these activities shall be of national or general importance, or affect the general interest of engineers. It is specified that no organization shall have more than 20 representatives on the council.

The constitution provides that the funds of the organization shall be provided on the basis of $1.50 per member for national societies and $1 per member for local, state, or regional organizations. The formation of local affiliations and State councils is provided for.

Among the resolutions approved was one endorsing the creation of a Federal Department of Public Works.

Many excellent and inspiring addresses were delivered. A pointed remark in the address of Mr. Homer L. Ferguson, past president, U. S. Chamber of Commerce, might be studied to advantage by the architectural profession. He said: "You won't have much of anything these days unless the voice of your business or profession is *heard*," and he meant heard by the Public and not by fellow members of the profession.

The trend of thought among many delegates and which found expression in the addresses reflected the idea that the engineer not only seemed to lack ability as a business man, but also had failed to assume his proper place of leadership in public affairs. This condition is probably not true alone of the engineering profession.

The organization of the new Federation should tend to correct these past deficiencies. Its creation is, in fact, placing our national motto "E Pluribus Unum" in action so far as the engineering profession is concerned.

Engineering Council Bulletin

REORGANIZATION OF EXECUTIVE DEPARTMENTS OF THE GOVERNMENT by a joint committee as provided in Smoots-Reavis resolution passed Senate May 10. The joint committee is to make a study of existing conditions and recommend a plan for reorganization. This legislation was introduced with the approval and on the recommendation of the National Public Works Department Association. Senators Smoot and Underwood made speeches favoring the legislation.

INTERSTATE COMMERCE COMMITTEE has ordered favorably report on Senator Cummins' amendment to Transportation Act, designed to relieve the car shortage situation and otherwise aid the railroads. Senator Poindexter's anti-strike bill, designed to prevent tieing up of interstate transportation on railroads, was reported to the Whole Committee.

DIVISION OF MINES AND GEOLOGY—A consolidation of the Bureau of Mines and U. S. Geological Survey, together with other mining activities of the executive departments has been proposed in bill introduced by Senator Henderson, Chairman of Committee on Mines and Mining. The proposed division to be administered by an assistant-secretary of the Interior, "technically qualified by experience and education for the position."

FEDERAL HIGHWAY LEGISLATION—The Townsend Bill which proposes to create a Federal Highway Commission in charge of all Federal road work is before the Senate Committee on Post Office and Post Roads. Present plans of cooperation with States was endorsed and advocated for the future by representatives of twelve State Highway Commissions. All witnesses have opposed further extension of road building work at present. The Public Works Department plan proposes to include present Bureau of Roads under appropriate administration, so that Federal Highway Commission is unnecessary.

INTERSTATE COMMERCE COMMISSIONERS—Senate confirmation of the appointment of three Interstate Commerce Commissioners, James Duncan, of Massachusetts; Mark W. Potter, of New York, and Henry J. Ford, Princeton, N. J., was held up until the Interstate Commerce Committee could further investigate their qualifications. The nomination of Roy S. McElwee to be director of Bureau of Foreign and Domestic Commerce confirmed by Senate.

APPROPRIATION BILLS—Sundry Civil Bill passed House carrying original power investigation and topographic appropriations, $125,000 and $330,000 respectively. Total in bill $428,000,000. Legislative, Executive and Judicial bill vetoed by the President. Conference report adopted on Fortifications Appropriation Bill and latter sent to President. Agricultural Appropriation bill recommitted to conference. Rivers and Harbors Appropriation Bill and Army Appropriation Bill held out of conference by House Consular and Diplomatic Service Appropriation bill and Navy Appropriation Bill, passed by both Houses and held in conference.

SEASONAL COAL TRANSPORTATION RATES BILL as proposed by Senator Frelinghuysen has been reported to the main Interstate Commerce Committee, but action of the full committee was deferred.

RAILROADS AND SHIPPERS are to be aided by $300,000,000 revolving fund for a period of five to fifteen years in legislation recommended by Senate Interstate Commerce Committee, after extensive hearings given principally to railroad executives, during which $500,000,000 was requested for this fund.

PUGET SOUND ENTRANCE by canal from Grays Harbor which has been the subject of extensive study by Army Engineers has been reported adversely.

TRANSPORTATION AND COMMUNICATION between Pan-American countries and the United States is to be cared for by committee of twenty-five members headed by Secretary of Commerce Alexander and Admiral Benson. This committee was authorized by resolution of Pan-American Financial Conference, but above leaders have just been appointed by the Secretary of Treasury. The work of this committee is to cover ocean transportation, shipping insurance, documentation, railroad transportation, radio and cable communication, and postal facilities in five subcommittees.

MERCHANT MARINE POLICE of a permanent nature tentatively adopted by the Senate with committee amendments to the House bill. Strong opposition had previously developed to the extension of coastwise navigation laws to the Philippines and the apparent inelasticity of present bill.

INTERNATIONAL CONSORTIUM for loans to China has been organized by U. S., England and Japan. This loan will enable China to go ahead with large construction program. The plan for giving China financial aid has been held up for nearly two years because of objections by Japan, which have just been removed.

WAR LABOR BOARD is to be absorbed by Council of National Defense, and U. S. Housing Corporation will pass out of existence June 30, 1920.